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CIRCUMSTANTIAL EVIDENCE AND CERCLA GENERATOR LIABILITY: ARE COURTS MAKING SUMMARY JUDGMENT EASIER FOR PRPS?

Bruce D. Wickersham*

I. INTRODUCTION

Congress enacted the Comprehensive Environmental Response, Compensation, and Liability Act¹ (CERCLA) in 1980 to address the threat to human health and the environment posed by unsafe disposal of hazardous waste.² Congress sought to make those parties responsible for unsafe disposal of hazardous wastes likewise responsible for


² See 42 U.S.C. § 9606(a) (1988). CERCLA authorizes the federal government to pursue “such relief as may be necessary” after a determination that “there may be an imminent and substantial endangerment to the public health or welfare or the environment because of an actual or threatened release of a hazardous substance from a facility.” Id.

In enacting CERCLA in 1980, Congress sought to provide the federal government immediately with tools necessary for prompt and effective response to the nationwide threat posed by hazardous waste disposal and to impose the costs and responsibility for remedial action upon the persons responsible for the creation of the hazardous waste disposal threat.


Although the magnitude and threat of the hazardous waste disposal problem is unclear, our society is deeply worried about toxic wastes. See Peter M. Sandman, Risk Communication: Facing Public Outrage, EPA J., Nov. 1987, at 21. According to Sandman, “outrage factors,” among which are the memorability of incidents such as Love Canal and the power of a symbol such as a fifty-five gallon drum, create public perception of risk in excess of scientifically determined expected annual mortality. Id. at 22. Reinforcing societal fears is the fact that “[a]pproximately one of every four Americans live [sic] within a few miles of an active Superfund site.” See Proposals to Reauthorize the Superfund Program: Hearings on H.R. 3800 Before the Subcomm. on Transportation and Hazardous Materials of the House Comm. on Energy and

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cleaning up the wastes and paying the bill.\(^3\) With these logical and fair principles in mind and in response to the national outrage over incidents such as Love Canal,\(^4\) Congress rushed to pass CERCLA,\(^5\) and courts and commentators have blamed inconsistencies in the statutory scheme on CERCLA's hasty passage.\(^6\)

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\(^3\)Superfund was structured on the principle that polluters should pay for cleanup. Browner Statement, supra note 2, at 196; see, e.g., B.F. Goodrich Co. v. Murtha, 958 F.2d 1192, 1198 (2d Cir. 1992) [hereinafter Murtha II] (CERCLA's two primary goals are to respond expeditiously to toxic spills and to hold parties responsible for release liable for costs of cleanup); Mottola, 605 F. Supp. at 902; United States v. Wade, 577 F. Supp. 1326, 1331 (E.D. Pa. 1983) (“the Act is intended to facilitate prompt clean-up of hazardous waste dump sites and when possible to place the ultimate financial burden upon those responsible for the danger created by such sites”).


\(^6\)See, e.g., United States v. Alcan Aluminum Corp., 964 F.2d 252, 258 n.5 (3d Cir. 1992) [hereinafter Alcan (3d Cir.)] (“CERCLA was passed in great haste during the waning days of the 96th Congress. As a result the statute is riddled with inconsistencies and redundancies.”); Mottola, 605 F. Supp. at 902 (“CERCLA has acquired a well-deserved notoriety for vaguely-
Despite CERCLA's grounding in fair principles, inartfully drafted liability provisions have created a far-reaching, and arguably unfair, scope of liability. For example, critics argue that CERCLA's retroactive effect is unfair. Moreover, CERCLA's lack of a traditional causation requirement and the financially ruinous costs that attend imposition of liability could create liability at odds with notions of fairness. Finally, where CERCLA plaintiffs offer circumstantial evidence to prove liability—the focus of this Comment—our legal system may be reluctant to impose a verdict not legitimated by direct evidence. This Comment describes how courts have handled difficult drafted provisions and an indefinite, if not contradictory, legislative history.

7 "Superfund cleanups cost too much, take too long and often impose unjust and disproportionate costs on potentially responsible parties." 139 CONG. REC. E3041 (daily ed. Nov. 24, 1993) (statements of Rep. Upton). See Owen T. Smith, The Expansive Scope of Liability Under CERCLA, 63 ST. JOHN'S L. REV. 821, 837 (1989) ("CERCLA's implementation has resulted in considerable litigation, coupled with the actual cleanup of only a handful of sites."). For background discussion of the parties covered by CERCLA liability and the strict, joint, and several nature of CERCLA liability, see infra part II.B.

8 See, e.g., Superfund Liability Issues: Hearings on H.R. 3800 Before the Subcomm. on Transportation and Hazardous Materials of the House Comm. on Energy and Commerce, 103d Cong., 2d Sess. 351 (statements of Dr. Benjamin Chavis, Jr., Feb. 10, 1994) (remarking on unfairness of retroactivity where actions were legal at time of occurrence).

Courts consistently hold that CERCLA's retroactive liability scheme is constitutional. See, e.g., United States v. Monsanto Co., 858 F.2d 160, 173 (4th Cir. 1988) ("even if CERCLA is understood to operate retroactively, it nonetheless satisfies the dictates of due process because its liability scheme is rationally related to a valid legislative purpose").

9 See generally John C. Nagle, CERCLA, Causation, and Responsibility, 78 MINN. L. REV. 1493 (1994) (providing history of legislative efforts to include tort-like proximate cause requirement in CERCLA, comparisons to proximate cause and market share liability schemes, judicial interpretation rejecting proximate cause requirement in CERCLA actions, and current proposals for changes to CERCLA's liability scheme).

10 See CBO, TOTAL COSTS OF CLEANING UP, supra note 2, at 36. The CBO's base estimate is that the average Superfund site will cost $25 million in total investigation and clean-up expenses. Id. CERCLA's strict, joint, and several liability provisions mean that a single party could be forced to pay the entire cost of remediation. See infra part II.B.

11 For examples of CERCLA's unfair results, see Cathleen Clark, Note, Should the Butcher, the Baker and the Candlestick Maker Be Held Responsible for Hazardous Waste?, 1994 UTAH L. REV. 871, 872.

12 See generally Charles Nesson, The Evidence or the Event? On Judicial Proof and the
questions of CERCLA liability where the plaintiffs’ cases turned on circumstantial evidence.

The following hypothetical illustrates the type of factual situations in which courts face difficult decisions on the CERCLA liability of generator defendants. Firm A produced a waste stream that contained some hazardous substances. Firm B, a waste hauler and a third party plaintiff seeking contribution from Firm A under CERCLA, presents evidence that fifty percent of the individual loads of waste generated by Firm A contained hazardous substances as defined by CERCLA. Although the plaintiff presents evidence that Firm B disposed of all waste generated by Firm A, the evidence also reveals that Firm B disposed of only fifty percent of the individual loads of waste taken from Firm A at the CERCLA site. Relying on the mathematical possibility that none of its hazardous waste reached the site, Firm A moves for summary judgment, arguing that the plaintiff has not met the burden of production of evidence.

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Acceptability of Verdicts, 98 Harv. L. Rev. 1357 (1985) [hereinafter Nesson, Proof and Acceptability].

Cases of naked statistical proof present the most provocative example of probable verdicts that are unacceptable. In these cases, the evidence suggests a sufficiently high numerical probability of liability, but the absence of deference-inducing mechanisms in the judicial process is such that the public is unable to view a verdict against the defendant as a statement about what actually happened.

Id. at 1378.

13 Producing a waste stream containing hazardous substances does not automatically lead to CERCLA liability; persons who have arranged for disposal of hazardous substances at a facility from which there has been a release requiring response are among those liable under CERCLA. See 42 U.S.C. § 9607(a)(3) (1988). See also infra part II.B for a detailed discussion of the elements of CERCLA liability.

14 CERCLA, 42 U.S.C. § 9607(a)(4) (1988), holds transporters of hazardous waste to a facility from which there has been a release liable for the costs of remediation. Firm B may have conceded threshold CERCLA liability but may be seeking to lower the cost of liability by impleading other defendants, such as Firm A.

15 Under CERCLA, 42 U.S.C. § 9613(f) (1988), parties that are jointly and severally liable under CERCLA may seek contribution from any party enumerated under 42 U.S.C. § 9607(a). The ability of private parties to seek reimbursement for response costs from all those responsible for hazardous waste disposal at the litigated facility not only facilitates cost spreading, but allows private parties to initiate clean-up measures. See infra part II.B.

16 There is no quantitative threshold for CERCLA liability. See infra text accompanying note 83. Thus, direct proof that Firm A disposed of even a single load of hazardous waste at the facility would cause Firm B to prevail. See 42 U.S.C. § 9607(a)(3). In this hypothetical, however, there is still the mathematical possibility that none of Firm A’s hazardous waste reached the site.

17 A summary judgment motion claims that because the nonmoving party has raised no genuine issue as to any material fact, the moving party is entitled to judgment as a matter of law. Fed. R. Civ. P. 56. Here, although Firm A may concede that there is a facility, from which
Given these facts, a court's response to Firm A's motion for summary judgment may not be predictable.\textsuperscript{18} Moreover, the clarity of fact assumed in the hypothetical is unlikely to be present in any litigated action,\textsuperscript{19} further complicating an already difficult problem.

This Comment looks at recent CERCLA cases to see how generator defendants whose disposal activities are not explained by direct evidence have fared in avoiding liability through summary judgment motions. CERCLA cases based on circumstantial evidence cannot be reduced, however, to certain, mechanical tests. Therefore, the second and more important goal of this Comment is to dissect and explain judicial behavior in this narrow realm of CERCLA liability cases.

In more concrete terms, this Comment discusses how courts have behaved when a defendant, a potentially responsible party (PRP)\textsuperscript{20} as a generator defendant,\textsuperscript{21} moves for summary judgment by asserting that the defendant was not a "covered person" under CERCLA.\textsuperscript{22} By critically analyzing this narrow area of CERCLA jurisprudence, this Comment attempts to discern how courts are now reacting to the perceived unfairness in CERCLA liability. This Comment inquires

\textsuperscript{18} If the nonmoving party has not produced sufficient evidence to support a finding as to a contested element of the prima facie case, then no issue of material fact exists as to that element and the court may resolve the dispute as to that element in the defendant's favor. See Celotex Corp. v. Catrett, 477 U.S. 317, 323 (1986); \textit{infra} part II.A (discussing summary judgment standards); see also \textit{infra} parts III and IV (discussing varying results from courts).


\textsuperscript{20} When the EPA finds that a site is contaminated seriously enough to warrant listing on the NPL, it will create a list of PRPs, from whom the EPA seeks contribution for remediation costs pursuant to CERCLA's liability provisions. See \textit{generally} Smith, \textit{supra} note 7. CERCLA authorizes the government to seek reimbursement for response costs. 42 U.S.C. § 9606. PRPs may be liable under CERCLA by falling within one of the four enumerated classes of covered parties: current owners of a facility, former owners of a facility, generators that disposed of hazardous waste at a facility, and transporters of hazardous waste to a facility. \textit{Id.} § 9607(a). Thus, after a PRP admits to being or is proven to be a member of one of the enumerated classes, the party has the legal status of a covered person. \textit{See id.; see \textit{generally} Smith, \textit{supra} note 7.}

\textsuperscript{21} 42 U.S.C. § 9607(a)(3). As a shorthand, this Comment will refer to PRPs alleged to have "arranged for disposal . . . of hazardous substances . . . at any facility" as generator defendants. \textit{Id.}

\textsuperscript{22} \textit{Id.} § 9607(a); \textit{see supra} note 20.
whether courts, having seen inconsistencies in CERCLA and heard complaints about CERCLA's unfair liability scheme, are allowing more defendants to escape CERCLA liability at the summary judgment stage by pointing out defects in the plaintiff’s offer of proof.

Section II.A briefly reviews the standard courts apply to motions for summary judgment. Section II.B delves into the statutory and judicial framework of CERCLA liability, and focuses specifically on the question of a generator defendant's status as a covered person or party under CERCLA. Section III provides background material on how courts have ruled on generator defendants’ motions for summary judgment that point out the insufficiency of circumstantial evidence presented by plaintiffs. Section IV presents Acme Printing Ink Co. v. Menard, Inc. [hereinafter Acme] and Dana Corp. v. American Standard [hereinafter Dana] and the standards applied to circumstantial evidence of the generator defendants’ status as covered persons. Section V discerns in the judicial practices that culminate with Acme and Dana a subjective weighing of circumstantial evidence and an implicit process of discrediting inferences analogous to the “product rule” from statistics. Section V concludes that to the extent judicial treatment of circumstantial evidence of generator liability in Acme and Dana appears relatively sympathetic to generator defendants, the perceived unfairness of the scope of CERCLA liability explains such a treatment. Finally, this Comment concludes that unspoken and subjective biases, implicit in CERCLA decisions and themselves reactions to CERCLA's perceived unfairness, will actually create a heightened perception of unfairness among litigants and therefore disserve our system.

II. EVALUATING SUMMARY JUDGMENT MOTIONS BY GENERATOR DEFENDANTS SEEKING TO AVOID CERCLA LIABILITY

A. Summary Judgment Standards

A motion for summary judgment is potentially dispositive, that is, granting a summary judgment motion in full resolves the litigation on the merits in favor of the moving party. A defendant moving for summary judgment may argue that the plaintiff “has failed to make

\[\text{870 F. Supp. 1465 (E.D. Wis. 1994).}\]

\[\text{866 F. Supp. 1481 (N.D. Ind. 1994).}\]

\[\text{STEPHEN C. YEAZELL ET AL., CIVIL PROCEDURE 653 (3rd ed. 1992).}\]
a sufficient showing on an essential element of [the] case with respect to which [the plaintiff] has the burden of proof.” Such factually insufficient claims should be prevented from going to trial “to secure the just, speedy and inexpensive determination of every action.”

According to Rule 56(c) of the Federal Rules of Civil Procedure, a court should grant summary judgment on a finding that “the pleadings, depositions, answers to interrogatories and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law.” No genuine issue of material fact exists “[w]here the record taken as a whole could not lead a rational trier of fact to find for the nonmoving party.” The nonmoving party must come forward with more than a mere scintilla of evidence in support of its position. Evidence presented by the nonmoving party must be adequate to support a finding by a reasonable fact-finder.

Nonetheless, the task of the defendant moving for summary judgment is likely to be difficult because all allegations made by the nonmoving party must be taken as true, even where such allegations conflict with the allegations of the moving party. In addition, a “court must view the record and draw all reasonable inferences from the evidence in favor of the non-moving party.” However, “[n]o genuine issue as to any material fact is created by ‘evidence of purportedly disputed facts if those facts are not plausible in light of the entire record.’” As the party moving for summary judgment, a defendant has no burden to prove that the plaintiff’s claims are untrue. A

26 Celotex Corp. v. Catrett, 477 U.S. 317, 323 (1986). “One of the principal purposes of the summary judgment rule is to isolate and dispose of factually unsupported claims or defenses. . . .” Id. at 323-24.
27 Id. at 327 (quoting FED. R. CIV. P. 1).
28 FED. R. CIV. P. 56(c).
32 See Dana, 866 F. Supp. 1481, 1489 (N.D. Ind. 1994).
35 See Dana, 866 F. Supp. at 1492.
The defendant need only point out that the plaintiff has presented insufficient evidence to prove each element of the plaintiff's claim.\textsuperscript{38}

The question of whether a plaintiff has presented evidence sufficient to support a finding as to the required elements of a CERCLA claim is essential to ruling on a generator defendant's motion for summary judgment.\textsuperscript{39} To further clarify the phrase “evidence sufficient to support a finding,” one court stated that “[t]he mere existence of a scintilla of evidence in support of the [nonmoving party’s] position will be insufficient [to avoid summary judgment]; there must be evidence on which the [finder of fact] could reasonably find for the [nonmoving party].”\textsuperscript{40} Although a “mere scintilla” is insufficient, the question of what is sufficient remains.\textsuperscript{41} Comparing the sufficiency standard, that is, the burden of producing evidence, to the higher burden of persuasion is one means of clarification.\textsuperscript{42}

The three generally accepted formulations for the burden of persuasion are, in order of decreasing stringency, “evidence beyond a reasonable doubt,” “clear and convincing evidence,” and “a preponderance of evidence.”\textsuperscript{43} Proof by a preponderance of the evidence is proof establishing that the existence of a fact is more likely than the nonexistence of that fact.\textsuperscript{44} In other terms, proof by a preponderance of the evidence is proof establishing that the likelihood of the occurrence of an event is greater than fifty percent.\textsuperscript{45} Logically then, evi-

\textsuperscript{38}Id. at 325; Dana, 866 F. Supp. at 1494.

\textsuperscript{39}See Dana, 866 F. Supp. at 1493 (applying summary judgment standards to CERCLA generator defendants’ motions for summary judgment).

Despite a generally applicable summary judgment standard, plaintiffs in CERCLA cases have argued that in light of CERCLA’s remedial nature and pressing public policy concerns, summary judgment should be harder for defendants to attain in CERCLA litigation. See id. at 1492 (discussing Plaintiffs’ Brief in Opposition). Nonetheless, courts have maintained that CERCLA does not change the summary judgment standard set out by the Federal Rules of Civil Procedure and judicial interpretation of that standard. See id. at 1493; Rhodes v. County of Darlington, 833 F. Supp. 1163, 1198 (D.S.C. 1992); see also CBS, Inc. v. Henkin, 803 F. Supp. 1426, 1431 (N.D. Ind. 1992) (applying Fed. R. Civ. P. standard to CERCLA litigation). Thus, in the generator cases that are the focus of this Comment, a plaintiff as nonmoving party must present evidence sufficient to support a finding in the plaintiff’s favor as to each element of a CERCLA prima facie case. See, e.g., Dana, 866 F. Supp. at 1493 (clearly breaking the prima facie CERCLA generator liability case into individual elements).

\textsuperscript{40}Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 252 (1986).

\textsuperscript{41}See id.

\textsuperscript{42}See 2 Strong et al., supra note 31, § 339.

\textsuperscript{43}See id.

\textsuperscript{44}Id. at n.12. The “preponderance” standard can be classified as proof based on probability. Id. Such a classification raises problematic questions of assessing punishment without an actual belief in the truth of the matter asserted. Id.

\textsuperscript{45}Jeffrey W. Stempel, A Distorted Mirror: The Supreme Court's Shimmering View of Sum-
dence sufficient to support a finding should be a lower standard than a preponderance of the evidence, and this relationship is embodied in the Federal Rules of Evidence. Nevertheless, after the trio of 1986 Supreme Court cases, Matsushita Electric Industrial Co. v. Zenith Radio Corp. [hereinafter Matsushita], Anderson v. Liberty Lobby, Inc. [hereinafter Liberty Lobby], and, Celotex Corp. v. Catrett [hereinafter Celotex], a court may raise the plaintiff's burden of production in two ways.

First, a court may integrate the nonmoving plaintiff's burden of persuasion at trial into consideration of the summary judgment motion. In other words, in a typical civil action the court may try to predict whether the plaintiff will be able to prove each element by a preponderance of the evidence. If the court determines that the plaintiff will be unable to meet the preponderance standard at trial, the court may grant summary judgment to the defendant. Thus, the burden of production at the summary judgment stage can be ratcheted up to a higher level equaling the burden of persuasion at trial.

Second, a court may compare the plausibility of an inference drawn in the plaintiff's favor against the plausibility of an inference drawn in favor of the defendant. Where a question has only two possible


46 See Fed. R. Evid. 104(b); see also 2 Strong et al., supra note 31, § 338. Thus, evidence may be sufficient to support a finding even though the evidence does not create a greater than 50% likelihood. See Daniel P. Collins, Note, Summary Judgment and Circumstantial Evidence, 40 Stan. L. Rev. 491, 514 (1988) (providing guidelines illustrating that plaintiff should survive summary judgment if “the plausibility of the plaintiff's inference” is greater than 10%). Prior to 1986, the proposition that a plaintiff would survive summary judgment merely by demonstrating a conflict in the admissible proof of important facts was generally accepted. See Stempel, supra note 45, at 144–59 (discussing case law and commentary prior to 1986).

47 475 U.S. 574 (1986).
50 See generally Stempel, supra note 45 (analyzing impact of these cases).
51 See Liberty Lobby, 477 U.S. at 252; see also Stempel, supra note 45, at 104 (stating that the Court in Liberty Lobby “held that the party opposing summary judgment must demonstrate to the court the existence of a fact dispute that would support a verdict in its favor applying the substantive standard of proof to be used at trial”).
52 See Liberty Lobby, 477 U.S. at 252; 2 Strong et al., supra note 31, § 338.
53 See Liberty Lobby, 477 U.S. at 252; 2 Strong et al., supra note 31, § 338.
54 See Stempel, supra note 45, at 104.

[An] inference of [inculpatory conduct] cannot be established by indirect evidence when the inference of innocent conduct is equally “as consistent” with the evidence.
answers, the plausibility of the positive inference is the complement of the negative inference. To survive summary judgment where a court compares inferences, the positive inference must appear more plausible. 56 Therefore, the plaintiff must produce evidence essentially equaling a preponderance of the evidence. 57

_Matsushita, Liberty Lobby, and Celotex_, taken together, “read like an ode to the wonders of summary judgment,” 58 and “mak[e] summary judgment easier to obtain and involv[e] trial judges in more activities that look suspiciously like pretrial factfinding.” 59 The fundamental policy behind summary judgments is to cut off baseless suits, thereby conserving judicial resources and protecting defendants from harassment in courts. 60 This policy may at times directly conflict with CERCLA's goal of accessing the largest possible source of clean-up funding. 61

In light of the expanded scope of judicial fact-finding authority, cases based on circumstantial evidence are especially vulnerable at the summary judgment stage. 62 A generator defendant in a CERCLA liability suit will prevail at the summary judgment stage unless the

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This seems to engraft a procedural innovation onto [substantive] law by replacing the usual rule that a plaintiff is entitled to have all reasonable inferences drawn in her favor with a much stricter standard—one which looks, not at the outer limits of plausibility, but rather at the point of equipoise between the two competing hypothesis. It suggests that if the judge finds the inference of innocent conduct to be the more plausible one, he may grant summary judgment to the defendant. 56

_Id._ at 497–98.


57 See id. at 498. An illustration may help clarify this idea. One of the elements of a prima facie case against a generator defendant is showing that the defendant produced hazardous waste. _See infra_ part II.B. Where the defendant actually produced waste and the plaintiff presents only circumstantial evidence about the nature of the waste, the only possible inferences are that the waste was hazardous, or that the waste was not hazardous. The probability of the positive inference—the waste was hazardous—is the complement of the negative inference—the waste was not hazardous. Stated differently, where the likelihood that the waste was hazardous is \(x\), the likelihood the waste was not hazardous is \((1-x)\). Thus, for the positive inference to be more plausible and survive the _Matsushita_ test, its likelihood must be greater than 50%, or equal to a preponderance standard.

58 Stempel, _supra_ note 45, at 106.

59 _Id._ at 107–08. This expanded authority for trial judges to act as factfinders at the summary judgment stage is in tension with the trial judge's traditional role of resolving all contested facts in favor of the nonmoving party. _See id._ at 145 n.275.

60 _See Celotex, 477 U.S._ 317, 327 (1986). With the advent of notice pleading, summary judgment has assumed the role formerly played by motions to dismiss, becoming a tool "by which factually insufficient claims or defenses could be isolated and prevented from going to trial with the attendant unwarranted consumption of public and private resources." _Id._

61 _See infra_ parts II.B, VI.

62 _See 2 STRONG_ ET AL., _supra_ note 31, § 338. Circumstantial evidence
plaintiff has met the burden of production of evidence as to each one of the elements of CERCLA liability.\textsuperscript{63} Therefore, a thorough understanding of the elements of CERCLA liability is necessary.

B. Statutory and Judicial Underpinnings of CERCLA Liability of Generator Defendants

CERCLA grants broad authority to the Executive branch of the federal government\textsuperscript{64} to provide for the cleanup of sites containing hazardous substances that pose an imminent and substantial danger to human health or the environment.\textsuperscript{65} In particular, the government is authorized to respond to an imminent and substantial danger by removing or arranging for the removal of hazardous substances, providing for remedial action relating to such hazardous substances, and

requires a weighing of probabilities as to matters other than merely the truthfulness of the witness. . . . \[I\]n the last analysis the judge’s ruling must necessarily rest on her individual opinion, formed in light of her own common sense and experience, as to the limits of inference from the facts proven.

\textit{Id.}

Surviving summary judgment is especially difficult in light of the Supreme Court’s efforts in \textit{Matsushita}, \textit{Liberty Lobby}, and \textit{Celotex} to make summary judgment more available to end litigation. \textit{See Stempel, supra} note 45, at 100–08 (reviewing cases and resulting trend). Commenting on the influence of the Supreme Court summary judgment trio, Stempel states that,

\begin{quote}

trial judges now have the Supreme Court approv[ed] power to weigh and judge a nonmovant’s facts as present but insufficient to persuade reasonable jurors. When this does not permit the judge to throw out the case, he or she may then examine the allegations made by claimant upon this admittedly conflicting record and deem the allegations and claimant’s interpretation of defendant’s conduct ‘implausible.’ . . . The trial judges power under Liberty Lobby includes . . . power to covertly enter judgment against particular litigants or claims that the judge disfavors.
\end{quote}

\textit{Id.} at 167–68. In addition to the judge’s ability to act instrumentally while factfinding at the summary judgment stage, Stempel also questions the legitimacy of deciding cases before the factual record is fully developed. \textit{See id.} at 170–81. In particular, Stempel notes that “a judge’s greater freedom to evaluate the quality of evidence seems . . . likely to increase the likelihood of Type II error” which Stempel has defined as “wrongfully exonerating a defendant who is actually liable” or “false exculpation.” \textit{Id.} at 179–80.


\textsuperscript{65} CERCLA states that:

[w]henever (A) any hazardous substance is released or there is a substantial threat of such a release into the environment, or (B) there is a release or substantial threat of release into the environment of any pollutant or contaminant which may present an imminent and substantial danger to the public health or welfare, the President is authorized to act, consistent with the national contingency plan, to remove or arrange
taking any other response measures consistent with the National Contingency Plan (NCP).  

In anticipation of the enormous cost of dealing with the nation's hazardous waste problems, Congress established a fund to help pay for remediation. Congress was concerned that remedial action across the country would bankrupt even a "Superfund." To ensure funding for extensive remediation of hazardous waste problems, Congress sought to make those responsible for hazardous waste problems pay for cleanups. Congress provided public and private plaintiffs authority to pursue civil actions against responsible parties for reimburse-

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for the removal of, and provide for remedial action relating to such hazardous substance, pollutant, or contaminant at any time (including its removal from any contaminated natural resource), or take any other response measure consistent with the national contingency plan which the President deems necessary to protect the public health or welfare or the environment.


Section 9606(c) requires the Administrator of the EPA to promulgate guidelines concerning imminent hazards, enforcement, and emergency response. Id. § 9606(c).

66 42 U.S.C. § 9604(a)(1) (enumerating types of response actions the government is authorized to undertake). The NCP, outlined in CERCLA, 42 U.S.C. § 9605(a), requires the President to develop procedures for identifying, investigating, evaluating, andremedying hazardous sites. Id. § 9605(a). In addition, § 9605(a)(8)(B) mandates that the President develop the NPL, which performs a triage function in allocation of clean-up resources. See id. § 9605(a)(8)(B). Section 9605(c) requires creation of a hazard ranking system to be applied in developing the NPL. See id. § 9605(c).


68 Kelley v. Thomas Solvent Co., 717 F. Supp. 507, 518 (W.D. Mich. 1989) (reviewing legislative history). "While CERCLA authorizes governmental cleanup of hazardous waste sites using money provided by the Superfund, the Superfund is limited and cannot finance cleanup of all the many hazardous waste sites nationwide." Id. "Congress knew when it enacted CERCLA that the costs of response activities would greatly exceed the Superfund." Id. (citing legislative history).

69 See supra note 3 and accompanying text; Kelley, 717 F. Supp. at 518 ("settlements of CERCLA cases in which the defendants agree to reimburse the Superfund for past expenditures and to undertake work that would otherwise be funded with Superfund money are in the public interest"); United States v. Price, 577 F. Supp. 1103, 1114 (D.N.J. 1983) (citing legislative history) ("the legislative aims of CERCLA ... include goals such as cost-spreading and assurance that responsible parties bear their cost of the clean up").
ment of clean-up costs.\textsuperscript{70} To facilitate CERCLA's remedial goals by creating the largest possible funding pool, Congress designated an expansive array of parties as being liable for clean-up costs.\textsuperscript{71} Current owners of a facility, former owners of a facility, generators that have disposed of hazardous waste at a facility, and transporters of hazardous waste to a facility are all liable pursuant to CERCLA.\textsuperscript{72} Congress maintained CERCLA's expansive liability scheme by enumerating only three limited, exclusive defenses: an act of God, an act of war, and an act or omission of a third party.\textsuperscript{73}

To effectuate Congress's intent to address an environmental crisis, courts historically have been liberal in construing CERCLA as

\textsuperscript{70} 42 U.S.C. §§ 9606, 9613(f).

\textsuperscript{71} Id. § 9607(a). CERCLA provides that:

\begin{itemize}
  \item [(a)] Notwithstanding any other provision or rule of law, and subject only to the defenses set forth in subsection (b) of this section—
  \begin{itemize}
    \item [(1)] the owner and operator of a vessel or a facility,
    \item [(2)] any person who at the time of disposal of any hazardous substance owned or operated any facility at which such hazardous substances were disposed of,
    \item [(3)] any person who by contract, agreement, or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by such person, by any other party or entity, at any facility or incineration vessel owned or operated by another party or entity and containing such hazardous substances, and
    \item [(4)] any person who accepts or accepted any hazardous substances for transport to disposal or treatment facilities, incineration vessels or sites selected by such person, from which there is a release, or a threatened release which causes the incurrence of response costs, of a hazardous substance, shall be liable for—
      \begin{itemize}
        \item [(A)] all costs of removal or remedial action incurred by the United States Government or a State or an Indian tribe not inconsistent with the national contingency plan;
        \item [(B)] any other necessary costs of response incurred by any other person consistent with the national contingency plan;
        \item [(C)] damages for injury to, destruction of, or loss of natural resources, including the reasonable costs of assessing such injury, destruction, or loss resulting from a release; and
        \item [(D)] the costs of any health assessment or health effects study carried out under section 9604(i) of this title.
      \end{itemize}
  \end{itemize}

The amounts recoverable in an action under this section shall include interest on the amounts recoverable under subparagraphs (A) through (D).

\textit{Id.}

In fact, the long reach of CERCLA liability is frequently litigated. See Smith, supra note 7, at 837 ("CERCLA's implementation has resulted in considerable litigation, coupled with the actual cleanup of only a handful of sites.").

\textsuperscript{72} 42 U.S.C. §§ 9607(a)(1)–(4).

\textsuperscript{73} Id. § 9607(b) (1988). CERCLA provides that:

\textit{[t]here shall be no liability under subsection (a) of this section for a person otherwise liable who can establish by a preponderance of the evidence that the release or threat}
a remedial statute imposing far-reaching liability against PRPs.74 Carrying out this liberal construction of CERCLA, courts set forth a straightforward framework that requires a CERCLA plaintiff to establish a prima facie case consisting of four elements.75 First, a plaintiff must show that the site is a CERCLA “facility.”76 Second, the plaintiff must show there has been a “release” or “threatened release”77 of a “hazardous sub-

of release of a hazardous substance and the damages resulting therefrom were caused solely by—

(1) an act of God;
(2) an act of war;
(3) an act or omission of a third party other than an employee or agent of the defendant, or one whose act or omission occurs in connection with a contractual relationship, existing directly or indirectly, with the defendant (except where the sole contractual arrangement arises from a published tariff and acceptance for carriage by common carrier by rail), if the defendant establishes by a preponderance of the evidence that (a) he exercised due care with respect to the hazardous substance concerned, taking into consideration the characteristics of such hazardous substance, in light of all relevant facts and circumstances, and (b) he took precautions against foreseeable acts or omissions of any such third party and the consequences that could foreseeably result from such acts or omissions; or
(4) any combination of the foregoing paragraphs.

Id.

74 Id.; see, e.g., United States v. Alcan Aluminum Corp., 964 F.2d 252, 257-58 (3d Cir. 1992) [hereinafter Alcan (3d Cir.)] (“In response to widespread concern over the improper disposal of hazardous wastes, Congress enacted CERCLA, a complex piece of legislation designed to force polluters to pay for costs associated with remedying their pollution . . . . CERCLA is a remedial statute which should be construed liberally to effectuate its goals.”); B.F. Goodrich Co. v. Murtha, 958 F.2d 1192, 1197 (2d Cir. 1992) [hereinafter Murtha II] (“In CERCLA Congress enacted a broad remedial statute designed to enhance the authority of the EPA to respond effectively and promptly to toxic pollutant spills that threatened the environment and human health.”).


76 See Alcan (3d Cir.), 964 F.2d at 258-59; Aceto Agric. Chem., 872 F.2d at 1378-79; Ascon Properties, 866 F.2d at 1152-53.

The term “facility” means (A) any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft, or (B) any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located; but does not include any consumer product in consumer use or any vessel.


77 Id. § 9601(22) (1988).

The term “release” means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance or pollutant or contaminant), but
stance.""78 Third, the plaintiff must show the release required the plaintiff to incur response costs.79 Finally, the plaintiff must show that

excludes (A) any release which results in exposure to persons solely within a workplace, with respect to a claim which such persons may assert against the employer of such persons, (B) emissions from the engine exhaust of a motor vehicle, rolling stock, aircraft, vessel, or pipeline pumping station engine, (C) release of source, byproduct, or special nuclear material from a nuclear incident, as those terms are defined in the Atomic Energy Act of 1954 [42 U.S.C. 2011 et seq.], if such release is subject to requirements with respect to financial protection established by the Nuclear Regulatory Commission under section 170 of such act [42 U.S.C. 2210], or, for the purposes of section 9604 of this title or any other response action, any release of source byproduct, or special nuclear material from any processing site designated under section 7912(a)(1) or 7942(a) of this title, and (D) the normal application of fertilizer.

Id. 78 See Alcan (3d Cir.), 964 F.2d at 258–59; Aceto Agric. Chem., 872 F.2d at 1378–79; Ascon Properties, 866 F.2d at 1152–53.

The term “hazardous substance” means (A) any substance designated pursuant to section 1321(b)(2)(A) of title 33, (B) any element, compound, mixture, solution, or substance designated pursuant to section 9602 of this title, (C) any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act [42 U.S.C. 6921] (but not including any waste the regulation of which under the Solid Waste Disposal Act [42 U.S.C. 6901 et seq.] has been suspended by Act of Congress), (D) any toxic pollutant listed under section 1317(a) of title 33, (E) any hazardous air pollutant listed under section 1317(a) of title 33, (E) any hazardous air pollutant listed under section 1317(a) of title 33, (E) any hazardous air pollutant listed under section 112 of the Clean Air Act [42 U.S.C. 7412], and (F) any imminently hazardous chemical substance or mixture with respect to which the Administrator has taken action pursuant to section 2606 of title 15. The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).


The Administrator of the EPA may also create regulations designating other hazardous substances.

The Administrator shall promulgate and revise as may be appropriate, regulations designating as hazardous substances, in addition to those referred to in section 9601(14) of this title, such elements, compounds, mixtures, solutions, and substances which, when released into the environment may present substantial danger to the public health or welfare or the environment, and shall promulgate regulations establishing that quantity of any hazardous substance the release of which shall be reported pursuant to section 9603 of this title.

Id. § 9602(a) (1988).


79 See Alcan (3d Cir.), 964 F.2d at 258–59; Dedham Water Co. v. Cumberland Farms Dairy, Inc., 889 F.2d 1146, 1150 (1st Cir. 1989). The response actions and costs incurred by private plaintiffs must have been consistent with the NCP as administered by the EPA. 42 U.S.C. § 9607(a)(4)(B). In actions brought by the government, response actions and costs need only have been not inconsistent with NCP standards. Id. § 9607(a)(4)(A). Although most courts have allocated the burden of showing that response costs were inconsistent with the NCP to defen-
the defendant falls within one of the classes of "covered," or responsible, parties or persons as defined by the statute.\textsuperscript{80}

Much CERCLA litigation involves disputes over the status of the defendant as a "covered" party or person.\textsuperscript{81} Four aspects of the judicial gloss on the definition of a "covered" party facilitate a plaintiff's case.\textsuperscript{82} First, as long as any amount of a substance designated as hazardous is found at the site, liability may attach; there is no minimum quantitative threshold for hazardous substances.\textsuperscript{83} Second, as long as generic hazardous substances like those the defendant disposed of at the site are found, liability may attach.\textsuperscript{84} There is no requirement that a CERCLA plaintiff "fingerprint" hazardous substances found at the site and prove that specific substances came from the defendant.\textsuperscript{85} Third, as long as hazardous substances like those the defendant disposed of at the site were present at the site at the time of release, liability may attach; the defendant's hazardous waste need not have triggered the release or threatened release.\textsuperscript{86} Finally, a de-
fendant cannot raise equitable defenses to threshold liability, although such considerations may affect apportionment of costs.

After a plaintiff has established that a defendant is liable under CERCLA, the defendant is strictly, jointly, and severally liable. As provided by statute and judicial application, a defendant may defendants' hazardous waste caused response costs, but, rather, whether a release or threatened release caused plaintiffs to incur response costs”). The proposition that the defendant's waste need not have caused the release or the plaintiff's incursion of response costs is well settled. See, e.g., Alcan (3d Cir.), 964 F.2d 252, 265 (3d Cir. 1992) (“virtually every court that has considered [the causation] question has held that a CERCLA plaintiff need not establish a direct causal connection between the defendant's hazardous substances and the release or the plaintiff's incurrence of response costs”). Nevertheless, defendants continue to seek to avoid liability by denying proximate causation. See, e.g., Acme, 870 F. Supp. 1465, 1481 (E.D. Wis. 1994); see also Nagle, supra note 9, at 1498-99 (arguing merits of traditional tort model).


88 See 42 U.S.C. § 9613(f)(1) (“court may allocate response costs among liable parties using such equitable factors as . . . are appropriate”).

89 Any person or party that as a matter of law is found to be a member of the enumerated categories, current and former owners, generators, and transporters, is liable under CERCLA. Id. §§ 9607(a)(1)-(4). This Comment uses “covered” and “responsible” interchangeably. A “potentially responsible party” or a “generator defendant” has not been found to be a member of the categories enumerated in CERCLA, 42 U.S.C. §§ 9607(a)(1)-(4), as a matter of law. See Alcan (3d Cir.), 964 F.2d at 258-59; United States v. Aceto Agric. Chem. Corp., 872 F.2d 1373, 1378-79 (8th Cir. 1989); Ascon Properties, Inc. v. Mobil Oil Co., 866 F.2d 1149, 1152-53 (9th Cir. 1989).


Joint and several liability allows a plaintiff to recover all damages from any individual defendant. See Keeton et al., supra note 90, § 47, at 328-30. The defendant against whom a
attempt to defeat liability,\textsuperscript{92} to seek contribution for clean-up costs,\textsuperscript{93} or to limit the extent of liability by proving the harm caused was divisible.\textsuperscript{94} In any of these three strategies, the defendant bears the burden of proof.\textsuperscript{95} To defeat its liability, a defendant must show the release occurred because of an act of God, an act of war, or an act or omission of a third party.\textsuperscript{96} Courts have construed this statutorily provided defense very narrowly.\textsuperscript{97} As an alternative strategy under the statutory scheme, a defendant may seek contribution by proving the liability of other PRPs.\textsuperscript{98} Beyond the statutory provisions, a defendant may proceed under the common law right to limit liability by proving divisibility of harm and thereby reduce financial exposure to the discrete costs associated with remediation of the defendant's own judgment is imposed bears the burden of seeking contribution from other parties. See 42 U.S.C. § 9613(f).

\textsuperscript{92} 42 U.S.C. § 9607(b) (enumerating defenses).
\textsuperscript{93} Id. § 9613(f).
\textsuperscript{94} See cases cited infra note 99.
\textsuperscript{95} 42 U.S.C. § 9607(b) (allocating burden of proving statutorily enumerated defenses to defendant); United States v. Wedzeb Enterprises, Inc., 809 F. Supp. 646, 658 (S.D. Ind. 1992) (allocating burden of proving divisibility to defendant). In an action for contribution, the defendant becomes plaintiff against another defendant with original burden of making out a prima facie case. See 42 U.S.C. § 9613(f).
\textsuperscript{96} 42 U.S.C. § 9607(b). CERCLA, 42 U.S.C. § 9607(b)(3), contains language severely restricting the third party defense, and is reinforced by stringent requirements, 42 U.S.C. § 9601(35). Id. §§ 9601(35), 9607(b)(3). Section 9601(35) forces defendants to act with heightened care and thoroughness in order to preserve the third party defense at all. See id. Although Congress added § 9601(35) in 1986 to provide safe haven from liability to innocent landowners, litigants have found little comfort there. See Browner Statement, supra note 2, at 208 ("this provision of the law has not functioned effectively"); see also L. Jager Smith, Jr., Note, CERCLA's Innocent Landowner Defense: Oasis or Mirage?, 18 COLUM. J. ENVTL. L. 155, 160-70 (1993) (analyzing cases).
\textsuperscript{97} See, e.g., Lincoln Properties, Ltd. v. Higgins, 823 F. Supp. 1528, 1539-40 (E.D. Cal. 1992) (narrowly construing third party defense). Indeed, the third party defense only applies if the harm was caused solely by a third party, and this defense is frequently litigated. See, e.g., United States v. Marisol, Inc., 725 F. Supp. 833, 838 (M.D. Pa. 1989) (disallowing defense alleging that third party was proximate, though not sole, cause of injury to plaintiff); see also Nagle, supra note 9, at 1538 (citing cases, stating that third party defense is most often litigated, and advocating expansion of defenses).
\textsuperscript{98} 42 U.S.C. § 9613(f)(1). CERCLA provides that:

\textit{a}ny person may seek contribution from any other person who is liable or potentially liable under section 9607(a) of this title, during or following any civil action under section 9606 of this title or under section 9607(a) of this title . . . . In resolving contribution claims, the court may allocate response costs among liable parties using such equitable factors as the court determines are appropriate.

\textit{Id.}

Of course, in such an action the defendant would bear the same burdens of proof that were demanded of a plaintiff. See supra note 95.
wastes. In summary, because of the enormous costs associated with CERCLA liability and the difficult burdens of minimizing that liability, CERCLA defendants have a strong incentive to avoid imposition of threshold liability.

III. DEFENSE STRATEGY: DENYING THAT DEFENDANT IS A COVERED PERSON UNDER CERCLA

One strategy for avoiding imposition of threshold liability is for a generator defendant to deny that the plaintiff has met the burden of producing evidence showing that the defendant is a person or party covered by CERCLA liability. The defendant’s status as a covered or responsible party or person may be the only element of CERCLA liability not admitted, as in the hypothetical presented above and several generator cases. The other elements of a prima facie case of CERCLA liability may be conceded: the site is a “facility,” from which there has been a “release” of “hazardous substance[s],” that caused the incursion of response costs. Because the other three elements are conceded, determining whether the defendant is a covered person under CERCLA takes on greater importance and therefore merits close scrutiny.

Stripped to its basic elements, the statute provides that “any person who . . . arranged for disposal or treatment . . . of hazardous substances owned or possessed by such person . . . at any facility . . . shall be liable . . . .” Upon closer scrutiny, this provision can be deconstructed into two parts. First, the plaintiff must show that the

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99 See, e.g., Alcan II (2d Cir.), 990 F.2d 711, 722 (2d Cir. 1993); Wedzeb Enterprises, 809 F. Supp. at 658.
100 See 42 U.S.C. § 9607(a)(3). Such a denial may take the form of a motion for judgment on the pleadings in the early stages of litigation. See FED. R. CIV. P. 12(c). A motion made after “pleadings, depositions, answers to interrogatories and admissions on file, together with the affidavits, if any,” is a summary judgment motion. FED. R. CIV. P. 56(c). A defendant may make a motion for summary judgment at any time. FED. R. CIV. P. 56(b).
101 See supra part I.
103 See 42 U.S.C. § 9601(9); supra note 76.
104 See 42 U.S.C. § 9601(22); supra note 77.
105 See 42 U.S.C. § 9601(14); supra note 78.
107 Id. §§ 9607(a)(3), (4).

The plaintiff must prove that the defendant disposed of a hazardous substance at the site, and that generic hazardous substances like those in the defendant's waste were present at the
defendant disposed of waste at the site.\textsuperscript{108} Second, the plaintiff must show that some part of the waste was "hazardous."\textsuperscript{109} Because both parts are necessary and independent, failure to meet the burden of production of evidence as to either element will be fatal for the plaintiff.\textsuperscript{110}

In a case where the plaintiff attempts to prove one or both of these parts through presentation of circumstantial evidence, the court will have to determine how permissive to be in drawing inferences of sufficiency as to each part.\textsuperscript{111} Moreover, from these intermediate inferences, the court must determine whether to draw the ultimate inference that a defendant is liable under CERCLA.\textsuperscript{112} Some degree of certainty as to each intermediate inference must underly the ultimate inference when the release occurred. See, e.g., United States v. Monsanto Co., 858 F.2d 160, 169 n.15 (4th Cir. 1988), cert. denied, 490 U.S. 1106 (1989); Dana, 866 F. Supp. 1481, 1493 (N.D. Ind. 1994); Massachusetts v. Blackstone Valley Elec. Co., 808 F. Supp. 912, 914 (D. Mass. 1992), supplemented by 867 F. Supp. 78 (1994); City of New York v. Exxon Corp., 766 F. Supp. 177, 191 (S.D.N.Y. 1991); United States v. Marisol, Inc., 725 F. Supp. 833, 840 (M.D. Pa. 1989) ("The minimal causal nexus required by CERCLA is met when the plaintiff proves by a preponderance of the evidence that the defendant's hazardous waste was deposited at the site and that the substances contained in the defendant's waste were also found at the site.").

\textsuperscript{108}See Dana, 866 F. Supp. at 1493.
\textsuperscript{109}Id.; see 42 U.S.C. § 9601(14) (defining "hazardous"); supra note 78.

Proof by direct evidence that a generator disposed of hazardous waste should make that generator liable under CERCLA as a matter of law. See supra text accompanying notes 100–09. Nonetheless, courts have created the additional requirement that a plaintiff must show that generic substances like those hazardous substances in the defendant’s waste were present at the site at the time of release. See Dana, 866 F. Supp. at 1493 (citing seven CERCLA cases standing for this proposition). See also infra note 276 discussing analytical foundations for this requirement. This requirement is rarely a difficult hurdle for a plaintiff because Superfund sites, by definition, are the largest and most contaminated sites, and often contain a plethora of hazardous substances. See CBO, \textit{TOTAL COSTS OF CLEANING UP}, supra note 2, at 2; see, e.g., United States v. Conservation Chem. Co., 619 F. Supp. 162, 182–83 (W.D. Mo. 1985) (presenting extensive list of hazardous substances found at site).

\textsuperscript{111}See, e.g., Dana, 866 F. Supp. at 1489; see also id. at 1503–35 (ruling on sufficiency of circumstantial evidence against generator defendants).
\textsuperscript{112}The following diagram clarifies the terminology used in this Comment:

\begin{itemize}
  \item \textit{Circumstantial evidence disposal}: Circumstantial evidence showing some of Defendant's waste was disposed of at the facility.
  \item \textit{Intermediate inference disposal}: Some of Defendant's waste was disposed of at the facility.
  \item \textit{Circumstantial evidence hazardous}: Circumstantial evidence showing Defendant's waste contained some hazardous substances.
  \item \textit{Intermediate inference hazardous}: Defendant's waste contained some hazardous substances.
  \item \textit{Ultimate Inference hazardous}: Defendant disposed of hazardous substances at the facility.
\end{itemize}

Traditionally courts purportedly refused to draw an inference on an inference, but recent jurisprudence has recognized that strict application of such a prophylactic rule would make every case nearly impossible. See 2 STRONG \textit{ET AL.}, supra note 31, § 338, at 435 n.13. Courts
mate inference. The crucial factor in CERCLA generator cases involving circumstantial evidence is how permissive courts are in drawing each intermediate inference, and then allowing the ultimate inference.114

A. Inferring That Defendant Disposed of Waste at the Facility

The first element necessary to imposing liability on a generator defendant is showing that the defendant’s wastes were disposed of at the site.115 As outlined in the hypothetical,116 the defendant’s waste may have been disposed of at multiple sites by multiple waste haulers over the course of several years. Adding to this factual complexity, there may be no records probative of the disposal issue, and testimony taken in discovery many years after the fact may leave the question unresolved.117 In such situations, courts must determine whether to infer from the indirect evidence presented that the defendant’s waste actually reached the facility.118

are still unwilling to stack inferences that are not well grounded in fact, or allow inferences that amount to statements that “anything’s possible.” See, e.g., Dana, 866 F. Supp. at 1497–98.

113 The importance of deconstructing the plaintiff’s burden into two separate elements is stressed in an analogy from statistics in part V. See infra part V. Put in simplest form, where two events are statistically independent, the likelihood that both will occur is the product of the likelihood that each will occur. Laurence H. Tribe, Trial by Mathematics: Precision and Ritual in the Legal Process, 84 HARV. L. REV. 1329, 1335 (1971) (providing rigorous statistical background). This “product rule” of probability theory confirms the visceral intuition that the likelihood of both events occurring may be small where the likelihood of each event is seriously in doubt. See id. For example, if the probability of A is 1/2 and the probability of B is 1/2, the probability of AB is 1/4. Id.

This Comment will not attempt to quantify probability in CERCLA generator cases or question case outcomes based on possible misuse of statistics. See infra part V. Part V argues, however, that a form of balancing analogous to the “product rule” is a means by which courts discredit plaintiff’s inferences in CERCLA generator liability cases. See infra part V. To the extent that this process is rooted in providing justification for a socially desired result, other legal commentary on the use of statistics in jurisprudence is relevant. See generally Daniel Shaviro, Statistical-Probability Evidence and the Appearance of Justice, 103 HARV. L. REV. 530 (1989) (arguing that social acceptability, not accuracy, is main requisite for judicial decision); Nesson, Proof and Acceptability, supra note 12; Charles R. Nesson, Reasonable Doubt and Permissive Inferences: The Value of Complexity, 92 HARV. L. REV. 1187 (1979).

114 See Dana, 866 F. Supp. at 1497–98.

115 See supra notes 107–10 and accompanying text.

116 See supra text accompanying notes 13–17.

117 See, e.g., Dana, 866 F. Supp. at 1504 (shipping orders and waste hauler testimony inadequate to prove disposal of American Standard’s aerosol cans at facility).

In United States v. Conservation Chemical Co. [hereinafter Conservation Chemical], the United States District Court for the Western District of Missouri found there was enough evidence to support the inference that the generator defendants' waste reached the litigated facility. The court based denial of the generator defendants' motion for summary judgment largely on the fact that these defendants arranged for disposal of waste through a "suspect waste hauler." In justifying the denial of the defendants' motions, the court reasoned that to cut off the plaintiff's case at summary judgment stage would be premature, especially because granting summary judgment was "a drastic remedy."

In addition, the Conservation Chemical court cited authority to bolster the proposition that a plaintiff need present relatively little evidence of disposal at the facility to survive a generator defendant's motion for summary judgment in a CERCLA action. In United States v. Wade, the court denied the generator defendants' motion for summary judgment. Although the affidavit of the president of the waste-hauling firm—who was a convicted felon and defendant in the case—was all the evidence of disposal presented, the court held that the disposal issue should be decided at trial.

In United States v. Ottati & Goss, Inc. and Conservation Chemical, the generator defendants conceded that their wastes had been shipped to the facilities in question, but contended without success that the wastes had been removed or transhipped before the site was

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120 See id. at 236-37.
121 Id. at 236.
122 Id. at 236-37.
123 See id. at 180.
124 Conservation Chemical, 619 F. Supp. at 236; United States v. Price, 577 F. Supp. 1103, 1116 (D.N.J. 1983). The court in Price denied summary judgment to the defendant despite the fact that "evidence compiled by the [plaintiff] is not overwhelming." 577 F. Supp. at 1116. Price can be distinguished from purely circumstantial cases because the plaintiff produced direct evidence, namely "three loading tickets indicating that waste chemicals generated by [the defendant] ended up at [the site]" and the corroborating testimony of a waste hauler. See id.
126 Id. at 1331. The generator defendants, in addition to arguing that the affidavit was not reliable, also argued that the declarant lacked personal knowledge that the defendants' waste were disposed of at the facility. Id. The court was troubled by this issue but, finding that the declarant had enough personal knowledge to justify admission of the affidavit, held that the testimony should be weighed at trial. Id. at 1331-32.
listed under CERCLA.\textsuperscript{129} The generator defendants in \textit{United States v. Monsanto}\textsuperscript{130} attempted the same maneuver with an equal lack of success.\textsuperscript{131} In these situations the defendants’ offers of evidence to prove removal of the waste was not enough to overcome the inference that at least some of the defendants’ wastes remained at the site.\textsuperscript{132}

In general, courts had been willing to infer that a defendant disposed of waste at a facility as long as there was some slight circumstantial evidence to support such a finding.\textsuperscript{133}

\section*{B. Inferring That Defendant’s Waste Was Hazardous}

The second element necessary for imposing liability on a generator defendant is showing that the defendant’s wastes were hazardous.\textsuperscript{134} Once again, direct evidence in the form of records and testimony may be difficult to discover and plaintiffs may have to rely on circumstantial evidence.\textsuperscript{135} Given a lack of direct evidence, a plaintiff may ask the court to make inferences either about the hazardous nature of a specific item of waste\textsuperscript{136} or about the likely existence of hazardous substances in a generic stream of waste.\textsuperscript{137}

\subsection*{1. Inferring That Specific Items of Waste Are Hazardous}

The circumstances of a case may require a court to infer whether a specific item of waste is hazardous.\textsuperscript{138} Whether the waste contained

\begin{footnotesize}
\textsuperscript{129} See Ottati, 630 F. Supp. at 1403; Conservation Chemical, 619 F. Supp. at 237. If true, such facts could prevent the plaintiff from showing both the disposal at the facility and the presence of hazardous substances like those in the defendant’s waste at the time of release. See Ottati, 630 F. Supp. at 1403; Conservation Chemical, 619 F. Supp. at 237.

\textsuperscript{130} 858 F.2d 160 (4th Cir. 1988).

\textsuperscript{131} See id. at 170–71.

\textsuperscript{132} See id. at 171; Ottati, 630 F. Supp. at 1403; Conservation Chemical, 619 F. Supp. at 237.

\textsuperscript{133} See, e.g., Conservation Chemical, 619 F. Supp. at 236–37 (association with suspect waste hauler enough to defeat summary judgment).

\textsuperscript{134} See supra notes 107–10 and accompanying text. This Comment uses the term hazardous without quotation marks as meaning hazardous for CERCLA purposes.

\textsuperscript{135} See, e.g., B.F. Goodrich Co. v. Murtha, 754 F. Supp. 960, 972 (D. Conn. 1991) [hereinafter \textit{Murtha I}] (presenting expert testimony that municipal waste generally contains hazardous waste and arguing therefore defendant’s municipal waste contained hazardous substances), aff’d, 958 F.2d 1192 (2d Cir. 1992).


\end{footnotesize}
a hazardous substance is easy to determine where the defendant concedes the presence of the material and statutes\textsuperscript{139} or regulations\textsuperscript{140} designate the material as hazardous. However, a defendant may dispute that statutes and regulations cover a specific substance, and such a dispute may require judicial interpretation of the definition of a hazardous waste.\textsuperscript{141}

As a threshold matter, some problems concerning definition of a substance as hazardous may result from vague statutory language.\textsuperscript{142} In Conservation Chemical,\textsuperscript{143} the court noted that, taken literally, CERCLA liability could attach where a defendant disposed of a pound of copper pennies at a facility from which there was a release.\textsuperscript{144} CERCLA liability is possible because copper is listed as a hazardous substance, there is no quantitative threshold, and there is no causation requirement.\textsuperscript{145} Furthermore, because there is no quantitative threshold, in United States v. Alcan Aluminum Corp.\textsuperscript{146} [hereinafter Alcan II (2nd Cir.)], a solution disposed of by the defendant was hazardous despite a concentration of hazardous substances in the solution allegedly less than the naturally occurring background levels of such substances.\textsuperscript{147}

Some courts have read CERCLA's hazardous substance definition in a way that was favorable to generator defendants. In Gallagher v. T.V. Spano Building Corp.,\textsuperscript{148} the defendant's disposal of construction

\textsuperscript{139} 42 U.S.C. § 9601(14); see supra note 78 and accompanying text.
\textsuperscript{140} Specific substances are designated as hazardous in the Code of Federal Regulations. 40 C.F.R. § 302.4 (1994). CERCLA, 42 U.S.C. § 9602(a), authorizes the EPA to promulgate such regulations.
\textsuperscript{141} See, e.g., Alcan (3d Cir.), 964 F.2d 252, 263 (3d Cir. 1992) (defendant argued that concentration of hazardous substance in waste solution was below naturally occurring background level; court held that substance was hazardous).
\textsuperscript{142} See, e.g., id.
\textsuperscript{143} 619 F. Supp. 162 (W.D. Mo. 1985).
\textsuperscript{144} Id. at 195–96 (noting the pound requirement is imposed by EPA regulations for some hazardous substances).
\textsuperscript{145} Id. An even more absurd result is possible through literal interpretation of CERCLA. See United States v. Wade, 577 F. Supp. 1326, 1332 (E.D. Pa. 1983). The statute would impose liability on anyone who arranged for disposal of hazardous substances at a facility; taken literally, there is no requirement that the defendant's hazardous waste ever reached the facility. Id.; see 42 U.S.C. § 9607(a)(3). Fortunately, courts have applied canons of judicial construction to preclude this absurd result. See Wade, 577 F. Supp. at 1332 (contemplating and rejecting this reading of CERCLA).
\textsuperscript{146} 990 F.2d 711 (2d Cir. 1993).
\textsuperscript{147} Id. at 720; United States v. Alcan Aluminum Corp., 755 F. Supp. 531, 536 (N.D.N.Y. 1991) [hereinafter Alcan I (2d Cir.)] (where court addresses defendant's argument on concentration), aff'd in part, rev'd in part, 990 F.2d 711 (2d Cir. 1993).
debris under a site resulted in a dangerous plume of methane gas seeping into newly constructed homes.149 Although the release caused clear danger to the homeowners—who had to evacuate their homes—and required subsequent remediation, and although under Delaware law the defendant had disposed of hazardous waste, no CERCLA liability attached because the waste did not fit the technical definition of a hazardous substance.150 Similarly, in Jastram v. Phillips Petroleum Co.,151 the United States District Court for the Eastern District of Louisiana found that the defendant did not dispose of a hazardous substance by releasing brine and saltwater.152 The court reached this finding despite the status of those substances as pollutants or contaminants, and an EPA memorandum advocating CERCLA liability in such situations.153

A different type of determination is required when a substance disposed of by the generator defendant has a hazardous constituent but is not explicitly listed as a hazardous substance.154 Here, a court must decide how permissive to be in inferring that the hazardous constituent separated from the waste while at the site.155 In both United States v. New Castle County and United States v. Serafini, the question was whether the defendants’ wastes were hazardous by virtue of having hazardous constituents.156 In New Castle County, the defendant’s waste product was not hazardous because the unusual conditions necessary to release the constituent were unlikely to be present at the site.157 In Serafini, because an intervening factor was

149 Id. at 1122.
150 Id. at 1122–23, 1128.
152 Id. at 1376.
153 Id. at 1376–77. Part of the confusion in Jastram resulted from the fact that CERCLA, 42 U.S.C. § 9604(a), authorizes the government to take response actions when a release of pollutants or contaminants creates a threat to human health or the environment. See Jastram, 39 Env’t Cas. Rep. at 1377. CERCLA, however, only imposes liability for disposal of hazardous substances. 42 U.S.C § 9607(a)(3).
155 A plaintiff may be able to show that the hazardous constituent element was present at the site at the time of release and, therefore, argue that, while at the site, the hazardous substance disassociated itself from the manufactured product disposed of by the defendant. See, e.g., New Castle County, 769 F. Supp. at 596; Serafini, 750 F. Supp. at 170.
156 New Castle County, 769 F. Supp. at 597; Serafini, 750 F. Supp. at 171.
157 New Castle County, 769 F. Supp. at 598. In New Castle County, the defendant disposed of polyvinyl chloride (PVC) resin used in its plastics manufacturing operation. Id. at 594. Vinyl chloride, a listed CERCLA hazardous substance, is polymerized or chemically linked to form PVC. Id. at 597. The plaintiff contended that because every molecule would not bond during
necessary to cause the hazardous constituent to disassociate from the manufactured product, the court was unwilling to designate the manufactured product as hazardous.\textsuperscript{158} The \textit{Serafini} court took this position in spite of the fact that the necessary intervening factor—fire—was a common occurrence at the site.\textsuperscript{159}

In contrast to cases where courts were unwilling to infer that a specific item of waste was hazardous, in \textit{United States v. Carolawn Co.},\textsuperscript{160} the United States District Court for the District of South Carolina inferred that the defendant’s waste product was hazardous because the hazardous constituent elements were likely to disassociate.\textsuperscript{161} The court permitted the inference that disassociation was likely to occur because the materials involved were mixtures.\textsuperscript{162} Through this inference the court defined the waste product as hazardous.\textsuperscript{163}

polymerization, trace amounts of unreacted vinyl chloride monomer in the defendant’s PVC would have separated from the PVC in the landfill. \textit{Id}. The court reviewed highly technical expert testimony in considering whether conditions at the landfill were such that the vinyl chloride would have migrated from the PVC. \textit{Id}. The court stated that heating PVC in a vacuum was an example of a condition that would release the unbonded vinyl chloride. \textit{Id}. The court went on to find that the testimony of the plaintiff’s experts was insufficient to establish that a necessary condition in fact occurred at the landfill. \textit{Id.} at 598. The court granted the defendant’s motion for summary judgment on the vinyl chloride issue despite the conceded presence of vinyl chloride at the facility. \textit{Id}. Thus, the court was unwilling to make the inference that the separation actually occurred. \textit{See id.}

\textsuperscript{158} \textit{Serafini}, 750 F. Supp. at 171 (scrap products from Capitol Records would release hazardous substances when burned, but the EPA had not yet listed product as hazardous).

\textsuperscript{159} \textit{Id}. at 170. The court in \textit{Serafini} found that the EPA, and not the court, had discretion to designate as hazardous materials that would break down into hazardous components under certain conditions. \textit{See id.} at 171. Part of the court’s reasoning relied on the assumption that fire would consume the disassociated hazardous element. \textit{See id.} Given that assumption, the court appeared unwilling to infer that the hazardous constituent element would be present at the site. \textit{See id.}

\textsuperscript{160} \textit{21 Env’t Rep. Cas. (BNA) 2124 (D.S.C. 1984)}.

\textsuperscript{161} \textit{See id.} (holding that water-based paint waste solution was hazardous because it was a mixture containing hazardous substances and it defied reason to distinguish between a mixture and its constituent elements).

\textsuperscript{162} \textit{See id.} In \textit{United States v. New Castle County}, the court made a thorough review of cases dealing with the issue of hazardous constituent elements. \textit{United States v. New Castle County}, 769 F. Supp. 591, 596 (D. Del. 1992). The court cited \textit{Carolawn} with approval as an example where a mixture containing hazardous constituents should be categorized as hazardous. \textit{New Castle County}, 769 F. Supp. at 596. The court stated that a mixture consists of two or more substances that retain their essential original properties and these individual components are easily separated from the mixture. \textit{Id}. Because the hazardous components separate or disassociate from the manufactured product readily, the court would be willing to infer that the separation occurred at the site. \textit{See id.} Thus, the manufactured product is hazardous. \textit{See id.}

\textsuperscript{163} \textit{See Carolawn, 21 Env’t Rep. Cas. (BNA) at 2126}. 
In addition, in both *United States v. Alcan Aluminum Corp.*\(^{164}\) [hereinafter *Alcan I (2nd Cir.)*] and *United States v. Western Processing Co.*,\(^{165}\) the defendants’ wastes were held to be hazardous substances by virtue of having hazardous constituents.\(^{166}\) The plaintiffs were unable to demonstrate that separation actually occurred, but such demonstrations were unnecessary because of the likelihood that disassociation or release would occur.\(^{167}\) The likelihood of occurrence permitted the inference that the substances were hazardous.\(^{168}\)

Thus, complex inferences are sometimes necessary to establish even such basic facts as whether a specific item of waste is hazardous.\(^{169}\) Although complex, these inferences are at least based on the factual certainty that the specific item in question was present in the defendant’s waste.\(^{170}\) In other instances, the court is asked to speculate about the presence of items in a waste stream.\(^{171}\)

2. Inferring That a Generic Stream of Waste Is Hazardous

In contrast to questions about a specific substance, a different problem arises where a plaintiff presents circumstantial evidence to prove the presence of a hazardous substance in a stream of waste,

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\(^{166}\) In *Alcan I (2nd Cir.)*, the court held that the defendant’s emulsion was a hazardous substance because of minute amounts of heavy metals in the emulsion. The court held in that way despite the defendant’s contention that there was a lower level of heavy metals in the emulsion than occurred as natural background levels. See *Alcan I (2nd Cir.)*, 755 F. Supp. at 540. In *Western Processing*, the court held that the defendant’s waste, non-hazardous oxazolidine liquid mixed with trace amounts of arsenic, was hazardous. *Western Processing*, 734 F. Supp. at 932–33, 942–43.

\(^{167}\) See *Alcan I (2nd Cir.)*, 755 F. Supp. at 540; *Western Processing*, 734 F. Supp. at 932–33, 942–43; *Carolawn*, 21 Env’t Rep. Cas. (BNA) at 2126. Thus, where mixtures were involved the inference that the hazardous substance would separate from the solution was not troubling for the court. See *Alcan I (2nd Cir.)*, 755 F. Supp. at 540; *Western Processing*, 734 F. Supp. at 932–33, 942–43; *Carolawn*, 21 Env’t Rep. Cas. (BNA) at 2126.

\(^{168}\) See *Alcan I (2nd Cir.)*, 755 F. Supp. at 540; *Western Processing*, 734 F. Supp. at 932, 942; *Carolawn*, 21 Env’t Rep. Cas. at 2126. Part of a court’s willingness to reach an inference may derive from familiarity with the factual event being inferred. Compare *Carolawn*, 21 Env’t Rep. Cas. (BNA) at 2126 (allowing inference that paint would separate) with *New Castle County*, 769 F. Supp. at 597 (disallowing inference that unbonded monomers dissociate from polymers).

\(^{169}\) See, e.g., *New Castle County*, 769 F. Supp. at 597 (considering release of unbonded molecules from polymer).

\(^{170}\) See, e.g., id. at 597–98.

\(^{171}\) See infra part III.B.2.
such as a series of truckloads or dumpsters.\textsuperscript{172} In these cases plaintiffs invite courts to infer the presence of some hazardous substance in the waste stream in two ways.\textsuperscript{173} The plaintiff may invite the court to infer the presence of hazardous items in the waste by pointing to the type of business conducted by the defendant,\textsuperscript{174} or by pointing to the usual characteristics of a generic waste stream.\textsuperscript{175}

An example of an offer of proof drawing on a defendant's business activities occurred in \textit{B.F. Goodrich Co. v. Murtha} [hereinafter \textit{Murtha IV}].\textsuperscript{176} There, the plaintiff presented evidence about the types of activity in which the generator defendants were engaged and urged the United States District Court for the District of Connecticut to infer the presence of some hazardous substance based on the nature of the generator defendant's business.\textsuperscript{177} The court took a restrictive position

\begin{footnotesize}
\begin{enumerate}
\item\textsuperscript{173} See \textit{Murtha III}, 815 F. Supp. at 544 (focusing on business activity); \textit{Atlas Minerals}, No. 91–5118, 1993 WL 518421, at *2 (focusing on type of waste).
\item\textsuperscript{174} See \textit{Murtha IV}, 840 F. Supp. 180, 183–84 (D. Conn. 1993) (plaintiff arguing that service station's waste would contain hazardous substances); \textit{Murtha III}, 815 F. Supp. at 544 (restricting inference based on business activity).
\item\textsuperscript{175} \textit{Atlas Minerals}, No. 91–5118, 1993 WL 518421, at *2 (offering expert testimony based on profile of normal office waste).
\item\textsuperscript{176} See 840 F. Supp. at 183–84.
\item\textsuperscript{177} \textit{Id.}; see \textit{Murtha III}, 815 F. Supp. at 544. Generator defendants were engaged in activities such as automobile repair, construction contracting, running a restaurant, owning a pharmacy, and light manufacturing. \textit{Murtha IV}, 840 F. Supp. at 183–91.

The plaintiffs sought to assess liability on defendants that disposed of materials such as cleaning supplies, light bulbs, bug traps, office waste, soiled paper towels, and tires. \textit{Id.} at 184–86. Despite the concession that some of these products undeniably contained listed hazardous substances, the court did not impose CERCLA's burdensome liability for disposal of waste of this type. \textit{Id.} The court granted the summary judgment motions of seventeen generator defendants based on a finding that the waste these defendants generated did not contain hazardous waste. \textit{Id.} at 184–91.

In deciding the motions of a coffee shop and a residential real estate management company, the court noted that discarded containers of cleaning products, which plaintiff's experts testified contained several enumerated hazardous substances, were not shown to have other than minuscule amounts of residue. \textit{Id.} at 184. The court relied on a conclusion it had reached in a previous hearing of the same case. \textit{Id.} at 188 (citing \textit{Murtha III}, 815 F. Supp. at 545–46). There, the court held that notwithstanding the hazardous constituent elements of a manufactured product, a product is not a hazardous substance unless the EPA has chosen to list the product as a hazardous substance. \textit{Murtha III}, 815 F. Supp. at 545–46. To the extent that the court in \textit{Murtha IV}, 840 F. Supp. at 180, relied on the minuscule amounts of hazardous substances in household products as a reason to deny hazardous status, such reliance is in tension with the avowed judicial standard that there is no quantitative threshold to CERCLA liability. See \textit{Alcan II (2d Cir.)}, 990 F.2d 711, 720 (2d Cir. 1993) (defendant liable though waste contained levels of hazardous substances lower than naturally occurring background levels of same substances). See cases cited \textit{supra} note 83.
\end{enumerate}
\end{footnotesize}
in allowing inferences based on the defendant’s line of business, and stated that,

[the fact that studies suggest that, cumulatively, a particular business generates HS [hazardous substances] does not prove that one engaged in that business necessarily, or probably, generates HS unless it is shown that everyone so engaged generated HS, or that the business could not be conducted without generating HS. Further it would have to be shown that a TPD [third party defendant] was engaged in that business as it was defined by the studies.]

Under the second approach, instead of focusing on the activity engaged in by the generator defendant, the plaintiff categorizes the type of waste disposed of by the defendant and invites the court to infer the presence of hazardous substances on this basis. For example, in United States v. Atlas Minerals & Chemicals, Inc., the plaintiff presented expert testimony about the generator defendant’s office waste. The plaintiff’s expert concluded that based on knowledge of what office waste generally contains, the waste in question was hazardous. The United States District Court for the Eastern District of Pennsylvania was unwilling to allow the inference that the defendant’s office waste contained hazardous substances and granted summary judgment.

In contrast to this outcome, the plaintiff in B.F Goodrich Co. v. Murtha [hereinafter Murtha I] had some success surviving summary judgment when the waste stream in question was municipal solid waste (MSW). Given the large quantity of MSW, the court appeared

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178 See Murtha III, 815 F. Supp. at 544.
179 Id.
182 Id.
183 Id. at *6.
184 Murtha I, 754 F. Supp. 960, 968–74 (D. Conn. 1991), aff’d, 958 F.2d 1192 (2d Cir. 1992). In fact, the plaintiff’s case against the municipal generator defendants had an extended history. In 1991, the district court denied the defendants’ motions for summary judgment. Id. The appellate court upheld the district court’s denial of summary judgment for the municipal generator defendants. Murtha II, 958 F.2d 1192, 1206 (2d Cir. 1992). In early 1993, the district court allowed plaintiffs to proceed against municipal generators, finding that the plaintiffs’ claims were sufficiently well grounded in fact to warrant further proceedings. Murtha III, 815 F. Supp. at 547. Finally, on close consideration of the factual basis of the expert’s testimony, the court granted the summary judgment motions of some of the municipal generator defendants. Murtha IV, 840 F. Supp. 180, 189 (D. Conn. 1993).
more willing to accept expert reports and generic studies as probative of the contents of MSW. The plaintiff had presented sufficient evidence to support an inference that the MSW contained hazardous substances. Thus the court denied the generator defendants’ summary judgment motions on the basis of probabilistic evidence from generic studies. Ultimately, however, the plaintiff was unable to show that the expert testimony about the existence of hazardous substances in the MSW had an adequate factual basis and the court granted the summary judgment motions of several municipal generators.

Thus, courts historically have displayed a range of attitudes toward making intermediate inferences necessary to finding generator liability under CERCLA. Courts have been relatively willing to infer disposal of waste at a facility. Courts have been somewhat willing to infer that a specific substance was hazardous depending on the characteristics of the particular substance. Courts have been relatively unwilling to infer from generic studies that a stream of waste contained hazardous substances. Building on this historical background, more recent court decisions reflect both an evolving attitude toward permitting intermediate inferences and a more refined, though implicit, approach toward reaching the ultimate inference.

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185 See Murtha I, 745 F. Supp. at 972. The expert reports and generic studies stated that .3% to .4% of MSW were hazardous substances. Id. The plaintiffs’ expert also found 11 hazardous substances typical of MSW landfill leachate at the sites being litigated. Id. Moreover, the court saw no reason “MSW from the Connecticut municipalities should radically differ from the MSW covered in the studies.” Id.

186 Id.

187 See id. Although an inference may be drawn as to hazardous substances in MSW, courts do not allow inferences about the composition of the waste of individual generators whose waste flows into MSW. See, e.g., Murtha III, 815 F. Supp. at 544. In addition, where the waste stream that a generator disposed of at a site not being litigated contained hazardous substances, a court will not allow an inference that the material the generator disposed of at the site being litigated was hazardous. See, e.g., id. at 546.

188 Murtha IV, 840 F. Supp. at 189.

189 See cases cited supra notes 115–88.

190 See supra part III.A.

191 See supra part III.B.1.

192 See supra part III.B.2.

193 See infra part IV. For definition of intermediate and ultimate inference as used in this Comment, see supra note 112.
IV. MAKING SUMMARY JUDGMENT EASIER FOR CERCLA GENERATOR DEFENDANTS THROUGH RESTRICTIVE TREATMENT OF CIRCUMSTANTIAL EVIDENCE: DANA\textsuperscript{194} AND ACME\textsuperscript{195}

A. Dana: Setting the Standard For Judging Plaintiff's Burden of Production in CERCLA Generator Liability Cases

1. Statement of the Standard in Dana

In Dana, the United States District Court for the Northern District of Indiana addressed

an issue not clearly answered by other courts: what sort of showing, short of direct evidence that a defendant's hazardous waste was disposed of at the site in question, will suffice to allow a CERCLA plaintiff to survive a motion for judgment as a matter of law, and hence survive a summary judgment motion.\textsuperscript{196}

Although the Dana court may not have been the first court to face this question,\textsuperscript{197} the court's opinion contains a clear statement of the standard to apply to circumstantial evidence when considering a defendant's motion for summary judgment.\textsuperscript{198} The court concluded that a "plaintiff must present evidence sufficient to support, by a preponderance of the evidence, a finding that a defendant's hazardous waste was disposed of at the site in question."\textsuperscript{199} The court further stated that a "plaintiff may satisfy this burden through the use of circumstantial evidence."\textsuperscript{200}

The test contains two elements.\textsuperscript{201} As the court stated in more concrete language, a plaintiff will survive summary judgment if it can show (1) that "the defendant produced a continuous and predictable waste stream that included hazardous substances of the sort eventually found at the site,"\textsuperscript{202} and (2) "that at least some significant part of that continuous and predictable waste stream was disposed of at the site."\textsuperscript{203} In the Dana court's opinion, such a showing is sufficient to

\textsuperscript{194} 866 F. Supp. 1481 (N.D. Ind. 1994).
\textsuperscript{195} 870 F. Supp. 1465 (E.D. Wis. 1994).
\textsuperscript{196} Dana, 866 F. Supp. at 1489.
\textsuperscript{197} See supra part III.
\textsuperscript{198} See Dana, 866 F. Supp. at 1489.
\textsuperscript{199} Id.
\textsuperscript{200} Id.
\textsuperscript{201} See supra notes 107–10 and accompanying text.
\textsuperscript{202} Dana, 866 F. Supp. at 1489.
\textsuperscript{203} Id.
support an inference by the factfinder that a defendant's hazardous waste was disposed of at the site, and allow a plaintiff to survive summary judgment.204

Conversely, if a plaintiff cannot show that a defendant produced a continuous and predictable waste stream that includes hazardous constituents, or that a significant part of the defendant's waste stream was disposed of at the site, a reasonable factfinder could not infer that the defendant is a responsible party.205 In that case, a court should grant summary judgment for the defendant unless the plaintiff has some further, more concrete evidence.206

Having announced the standard, the court applied that standard to the summary judgment motions of multiple generator defendants.207 The court's application of the standard further illuminated the plaintiff's burden of production to survive summary judgment.208

2. Treatment of Dual Intermediate Inferences In a Single Test

Proof that a defendant disposed of hazardous waste at a facility209 consists of showing that the defendant's waste contained hazardous substances and that the defendant's waste was disposed of at the facility.210 Although the Dana court was careful to review the factual bases of these showings independently,211 the court always considered both pieces together before reaching the ultimate inference.212 The Dana court implicitly weighed the degree of certainty as to each element, and only allowed the ultimate inference where the combined weights appeared sufficient.213

The Dana court's treatment of generator defendant Syracuse Rubber was illustrative of what the court required before concluding that a generator defendant's waste contained a hazardous substance.214 Syracuse Rubber produced 100 batches of raw rubber daily and every

204 See id.
205 Id.
206 See id.
207 Dana, 866 F. Supp. at 1503–35.
208 See id.
209 Such a showing brings the defendant within the scope of CERCLA liability. See 42 U.S.C. § 9607(a)(3); see also supra part II.B (for detailed discussion of elements of CERCLA liability).
210 See, e.g., Dana, 866 F. Supp. at 1489.
211 See, e.g., id. at 1529–30 (considering existence of hazardous substance in waste and then considering disposal at facility by defendant Syracuse Rubber).
212 See, e.g., id. at 1531; see also infra part V.
213 See, e.g., Dana, 866 F. Supp. at 1531. Analysis and critique of this test in Dana is the subject of Part V of this Comment.
214 See id. at 1528–31.
day discarded into its general waste stream the packaging of the additives used in manufacturing rubber goods.215 The additives included listed hazardous substances.216 Plaintiffs alleged that the additive packaging would have contained residues of hazardous substances217 and that hazardous substances were therefore “ubiquitous” in the defendant's waste.218

The court denied the defendant's motion for summary judgment despite the court's finding that “the percentage of Syracuse Rubber waste disposed of at the Site would fall between 0% and 50% of the waste actually hauled by [the waste hauler], most likely at the lower end of the range.”219 Although the court did not grant the summary judgment motion of Syracuse Rubber, the court did grant the summary judgment motions of every other generator defendant.220 The plaintiff's case against Syracuse Rubber survived summary judgment because there was a high enough degree of certainty as to the intermediate inference that the waste contained hazardous substances.221 Although evidence as to the other intermediate inference—that the waste was disposed of at the facility—was weak, the court determined that on balance there was sufficient evidence to support the ultimate inference.222

In contrast to this situation, a different situation occurred as to defendant City of Warsaw, a municipal waste generator.223 The plaintiff proved with direct evidence that the generator defendant disposed of twenty loads of waste at the site during a ten-day period in 1975.224 Because the disposal element was proven, the crucial question was whether the defendant's waste contained hazardous substances.225 The plaintiff offered testimony of the defendant's waste supervisor describing the waste as probably containing paint cans, batteries, and oil filters.226 The plaintiff also offered testimony of an expert who opined on the materials likely to have been in the waste

215 Id. at 1528–29.
216 Id. at 1528 n.278.
217 Id. at 1528–29.
218 Dana, 866 F. Supp. at 1529.
219 Id. at 1531.
220 See id. at 1535.
221 See id. at 1530–31.
222 See id. at 1531.
223 See Dana, 866 F. Supp. at 1505–06.
224 Id. at 1505 & n.68.
225 See id. at 1505–06.
226 Id. at 1505.
stream and concluded there were hazardous substances in the defendant’s waste.\textsuperscript{227} So unconvincing to the court was the plaintiff’s showing that the defendant’s waste contained hazardous substances that, despite proof on the disposal element, the court granted summary judgment in favor of the defendant.\textsuperscript{228} Thus, even though one intermediate inference was unnecessary because of proof by direct evidence, in light of the weakness of proof offered to support the other intermediate inference, the court was unwilling to allow the ultimate inference.\textsuperscript{229}

The court also faced situations where both elements were in doubt, such as in the case against defendant Huber, Hunt & Nichols, Inc. (Huber Hunt).\textsuperscript{230} A driver for the waste hauler that was seeking contribution from generator defendants estimated that seventy-five to eighty percent of Huber Hunt’s waste was disposed of at the site.\textsuperscript{231} Further, the plaintiff presented direct testimony of the driver stating that the waste stream contained paint cans, shingles, tar paper, and five-gallon buckets of roofing tar.\textsuperscript{232} The court was willing to assume that the plaintiff presented evidence showing the defendant’s construction waste contained hazardous substances.\textsuperscript{233} Nonetheless, because there was no direct proof of disposal at the facility, the court was not willing to infer that the defendant’s hazardous waste reached the facility.\textsuperscript{234} Thus, although one intermediate inference was fairly well supported, because the second intermediate inference was supported too poorly, on balance the court would not permit the ultimate inference.\textsuperscript{235} Therefore, the court granted summary judgment to the defendant.\textsuperscript{236}

Similarly, the court granted summary judgment to defendant American Standard, Inc. because the plaintiff presented too little

\textsuperscript{227} See id. at 1506. Much like the ultimate treatment of the expert affidavit in \textit{Murtha IV}, 840 F. Supp. 180, 187–88 (D. Conn. 1993), the court in \textit{Dana} was unwilling to credit this testimony as having the factual foundation necessary to establish the contents of this particular MSW generator’s waste. See \textit{Dana}, 866 F. Supp. at 1506.

\textsuperscript{228} See \textit{Dana}, 866 F. Supp. at 1506.

\textsuperscript{229} See id.

\textsuperscript{230} Id. at 1516–18.

\textsuperscript{231} Id. at 1517. The court was clearly skeptical of this driver’s testimony and appeared to discount the probative value of the testimony despite recognizing that “the summary judgment stage is not the time to weigh evidence.” See id.

\textsuperscript{232} Id.

\textsuperscript{233} \textit{Dana}, 866 F. Supp. at 1517.

\textsuperscript{234} Id. at 1518.

\textsuperscript{235} See id.

\textsuperscript{236} Id.
evidence to support both intermediate inferences.237 An employee of the defendant testified that the general production waste contained “vinyl, oil and oil filters, brake fluid, transmission fluid, lacquer, used paint filters, five-gallon buckets containing solvent based paint, paint scrapings, adhesives, and alkaline cleaners.”238 The plaintiff’s expert established that such waste products contained listed hazardous substances.239 The defendant’s employee also testified that the general production waste was disposed of in “roll-off containers” provided by the waste hauler during several months in 1977 or 1978 when compactor trucks were not provided by the waste hauler.240 Testimony of one of the waste haulers indicated that he took roll-off containers from the defendant to the site.241 According to the waste hauler, however, the waste in the roll-off containers that he hauled did not include general production waste.242 Moreover, the plaintiff presented no evidence that compactor trucks were not available when that waste hauler took roll-off containers from the defendant to the site.243 Thus, the plaintiff presented too little evidence to adequately support both intermediate inferences and the court was unwilling to reach the ultimate inference.244

B. Acme: Continuing Favorable Treatment for CERCLA Generator Defendants at the Summary Judgment Stage

In Acme,245 the United States District Court for the Eastern District of Wisconsin considered the summary judgment motions of twelve “fast track” CERCLA generator defendants.246 Like the court in Dana,247 the Acme court considered both independent elements together in determining whether to reach the ultimate inference.248

237 See id. at 1503–04.
238 Dana, 866 F. Supp. at 1503.
239 Id.
240 Id.
241 Id.
242 See id.
244 See id. (granting the generator defendant’s motion for summary judgment).
245 870 F. Supp. 1465 (E.D. Wis. 1994).
246 Id. at 1481. “Fast track” apparently referred to expedited consideration given the motions of these defendants. See id. “These defendants generally argue either that they did not dispose of hazardous wastes at the . . . site or that the waste they did deposit did not contain hazardous substances.” Id.
247 See supra part IV.A.
248 See, e.g., Acme, 870 F. Supp. at 1483 (defendant Bel-Aire deposited waste at the facility;
Also like the court in *Dana*, the *Acme* court was generally unwilling to allow the ultimate inference from the plaintiff’s circumstantial evidence.249

In the case against defendant Bel-Aire, the defendant was a paving contractor that removed and paved driveways, sidewalks, and streets for private residences and municipalities in the Milwaukee area.251 Bel-Aire disposed of broken concrete and dirt at the site, but denied disposing of any hazardous materials, including the asphalt that the plaintiff alleged.252 Pointing to the type of business the defendant conducted, the plaintiff alleged that Bel-Aire “must have” disposed of asphalt at the facility.253 In addition, the plaintiff presented evidence that “the site contained large amounts of asphalt intermixed with broken concrete”254 and urged the court to infer the asphalt had come from Bel-Aire.255 The court held that the plaintiff had failed to produce sufficient evidence that the defendant’s waste was hazardous and granted summary judgment to the defendant.256

The case against defendant Cardinal Fabricating further revealed the court’s attitude toward extending generator liability.257 There, the defendant conceded, for the purposes of summary judgment only, that its waste contained hazardous substances.258 Cardinal Fabricating denied, however, disposing of waste at the site in question.259 In consid-

plaintiff could not prove the waste was hazardous; court granted defendant’s summary judgment motion). See also supra note 112 for definition of terms used in this Comment and supra part II.B for information on elements of CERCLA liability.

249 See supra part IV.A.

250 See *Acme*, 870 F. Supp. at 1499 (granting 10 of 13 generator defendants’ motions for summary judgment on CERCLA liability).

251 Id. at 1483.

252 Id. The court noted without elaboration that asphalt “contains hazardous substances.” Id.

253 Id.

254 Id.

255 See *Acme*, 870 F. Supp. at 1483.

256 Id. The court appeared to give weight to the testimony of a driver employed by the trucking company that owned the site. See id. Although the defendant apparently used its own trucks and drivers to take waste to the site, the court credited the testimony of the driver for the trucking firm—that he never saw the defendant dump other than concrete or ground—as establishing that all the defendant’s wastes were nonhazardous. See id. The court reached this factual conclusion despite claiming to view “the evidence in a light most favorable to [the plaintiff].” Id.

257 See id. at 1486.

258 Id. at 1486 n.6. The defendant fabricated steel beams and columns for the construction industry. Id. at 1486. The defendant painted fabricated products with paint primers that contained several hazardous substances. Id.

259 Id.
erring whether the plaintiff met the burden of production of evidence, the court again gave weight to the testimony of the truck driver employed by the site owner.\textsuperscript{260} The driver testified that the firm's practice was to dispose of only solid waste at the site while taking rubbish, like that admittedly disposed of by the defendant, to another dump.\textsuperscript{261} In spite of there being hazardous wastes consistent with the type generated by the defendant at the site, the court found that the plaintiff's argument "amount[ed] to little more than speculation."\textsuperscript{262} Thus, the court would not permit the ultimate inference and granted the defendant's motion for summary judgment.\textsuperscript{263}

The court was even more permissive in granting the summary judgment motion of generator defendant Service Painting Corporation.\textsuperscript{264} The plaintiff contended that the defendant's stream of waste sand-blasting sand also contained paint cans, and therefore would have been hazardous.\textsuperscript{265} The court stated that "this conclusion is not unreasonable."\textsuperscript{266} Furthermore, the plaintiff presented evidence that "waste found at the site was consistent with the sort of waste [the defendant] would have generated."\textsuperscript{267} In fact, when the waste hauler was shown photographs of containers excavated from the site, he testified that it was "very possible" that the containers came from the defendant.\textsuperscript{268} Yet, because the paint cans were relatively common, the court would not infer the waste came from the defendant and granted summary judgment.\textsuperscript{269}

In summary, the court in \textit{Acme} was extremely restrictive in allowing inferences against generator defendants.\textsuperscript{270}

\textsuperscript{260} See \textit{Acme}, 870 F. Supp. at 1486.

\textsuperscript{261} \textit{Id.} For the court to give this testimony great weight was somewhat misguided. Had the trucking firm adhered to such policies, no rubbish containing hazardous substances would have been found at the site. See \textit{id.} Such wastes were present at the site, however, and the driver admitted to not following the disposal policy on occasion. See \textit{id.} at 1485. Thus, for this testimony to establish a factual presumption against the plaintiff is odd if the court was really viewing the evidence in a light most favorable to the plaintiff. See \textit{id.} at 1486.

\textsuperscript{262} \textit{Id.} at 1486.

\textsuperscript{263} \textit{Id.}

\textsuperscript{264} See \textit{id.} at 1494–96.

\textsuperscript{265} \textit{Acme}, 870 F. Supp. at 1495.

\textsuperscript{266} \textit{Id.}

\textsuperscript{267} \textit{Id.}

\textsuperscript{268} \textit{Id.} The containers in question were five-gallon paint cans that apparently would have contained hazardous substances. See \textit{id.}

\textsuperscript{269} See \textit{id.} at 1496. The court admitted that the plaintiff offered better proof that this defendant disposed of hazardous waste at the facility than the plaintiff had offered against the other "fast-track" defendants, but still held that the case rested largely on speculation. \textit{Id.}

\textsuperscript{270} See \textit{Acme}, 870 F. Supp at 1483–98 (granting 10 of 13 motions for summary judgment).
V. A Defective Product: Critical Analysis of Judicial Rulings on CERCLA Generator Defendants’ Summary Judgment Motions

A. CERCLA’s Perceived Unfairness as an Explanation for the Uniform Granting of Summary Judgment

Statutorily and judicially mandated characteristics of CERCLA make it relatively easy for plaintiffs to state a prima facie case of liability. Statutorily, it is relatively easy for plaintiffs to state a prima facie case of liability. And yet, essential facts may be difficult for plaintiffs to prove by direct evidence, especially in generator cases. Defendants naturally seek escape from the cruel specter of continuing CERCLA litigation and enormous liability for remedial costs by challenging the factual premises of plaintiffs’ cases with motions for summary judgment.

As laid out previously, a plaintiff must show both that the defendant’s waste was hazardous and that the defendant’s hazardous waste reached the facility before CERCLA liability will attach. In addition, courts add the requirement that generic hazardous substances like those in the defendant’s waste be present at the site at the time of the release. By presenting direct fact, the plaintiff subsequently motioned for reconsideration, arguing that the court had “resolved issues of witness credibility and impermissibly weighed inferences reasonably drawn from the evidence.” Acme Printing Ink Co. v. Menard, Inc., No. 89-C-834, 1995 U.S. Dist. LEXIS 10245, at *13 (E.D. Wis. June 29, 1995) [hereinafter Acme II]. On reconsideration, the court let stand the earlier grants of summary judgment. Id. at *20. Moreover, the court flatly stated that “Rule 56 . . . is especially important under statutes with broad, sweeping liability such as CERCLA.” Id.

271 See supra part II.B for elements of CERCLA claim and notes 83–88 and accompanying text for aspects of CERCLA that facilitate plaintiff’s case.

272 See, e.g., Acme, 870 F. Supp. at 1483–98 (assessing lack of factual clarity as to 13 generator defendants); Dana, 866 F. Supp. 1481, 1503–34 (N.D. Ind. 1994) (assessing lack of factual clarity as to 10 generator defendants); see also supra part IV.

273 See supra note 2.


275 See supra notes 107–10 and accompanying text.

276 See supra note 110 and accompanying text. See, e.g., United States v. Monsanto Co., 858 F.2d 160, 169 n.15 (4th Cir. 1988) (plaintiff must merely “present evidence that a generator defendant's waste was shipped to the site and that hazardous substances similar to those contained in the defendant's waste remained present at the time of release"), cert. denied, 490
evidence, a plaintiff passes the threshold of sufficiency relatively easily.\textsuperscript{277}

Where a plaintiff offers circumstantial evidence, however, courts have to determine how permissive to be in making critical inferences.\textsuperscript{278} Evaluating the inferences requires a court to engage in pretrial factfinding where subjective values may play a determinative role.\textsuperscript{279} In CERCLA generator liability cases, the perception of unfairness in CERCLA's liability scheme may color judicial reaction to the proffered inferences.\textsuperscript{280}

Accordingly, the results of recent CERCLA generator liability cases have been relatively uniform in discrediting inculpatory circumstantial evidence and refusing to draw inferences in the nonmoving plaintiff's favor.\textsuperscript{281} Some of this uniformity is a result of \textit{Matsushita}, \textit{Liberty Lobby}, and \textit{Celotex}, where the Supreme Court coaxed lower courts to lighten their caseloads through increased use of summary judgment.\textsuperscript{282} The most important impact of the Supreme Court trilogy in the CERCLA context, however, is that these cases authorize trial judges to weigh facts and assess the comparative plausibility of infer-

\footnotesize{U.S. 1106 (1989). This requirement is curious in light of the judicial standard that the plaintiff does not have to prove either causation or fingerprinting. See, e.g., Arizona v. Motorola, Inc., 805 F. Supp. 742, 746 (D. Ariz. 1992) (only causation issue is whether release caused plaintiff to incur response costs); United States v. Wade, 577 F. Supp. 1326, 1333 (E.D. Pa. 1983) (no fingerprinting requirement); see also \textit{supra} notes 83-86 and accompanying text. Perhaps, showing the presence, at the site at the time of release, of generic hazardous substances like those in the defendant's waste stands as a surrogate for causation, indicating judicial unwillingness to stray too far, or too quickly from traditional tort concepts. See Nagle, \textit{supra} note 9, at 1524-31 (criticizing CERCLA's lack of proximate cause requirement). Just as likely, courts require this showing to reinforce the plaintiff's proof as to whether the defendant actually disposed of hazardous waste at the site, implicitly indicating judicial unease with reliance on wholly circumstantial evidence. See \textit{Dana}, 866 F. Supp. at 1489.}

\textsuperscript{277} \textit{See} 2 \textsc{Strong} \textsc{et al.}, \textit{supra} note 31, § 339.

\textsuperscript{278} \textit{See} \textit{supra} part IV.

\textsuperscript{279} \textit{See} Stempel, \textit{supra} note 45, at 107-08.

\textsuperscript{280} \textit{See} supra notes 7-12 and accompanying text for discussion of CERCLA's perceived unfairness. See \textit{supra} note 62 for discussion of subjectivity in summary judgments. In addition, when deciding the plaintiff's motions for reconsideration, the \textit{Acme} court intimated its preference for limiting CERCLA liability through summary judgment. See \textit{Acme II}, No. 89-C-834, 1995 U.S. Dist. LEXIS 10245, at *20 (E.D. Wis. June 29, 1995) ("Rule 56 . . . is especially important under statutes with broad, sweeping liability such as CERCLA.").

\textsuperscript{281} \textit{See} \textit{supra} part IV.

\textsuperscript{282} \textit{See} \textit{supra} notes 45-62 and accompanying text. \textit{See} Stempel, \textit{supra} note 45, at 107 (characterizing trio of cases as exhortation to trial judges to "loosen up" and grant more summary judgments).
ences at the summary judgment stage. This fact-finding power enables trial judges to act instrumentally, creating a subjective filter on facts and inferences that leads inexorably to the outcome the judge favors.

The generally perceived unfairness of CERCLA liability is a major reason for the uniformity in recent CERCLA summary judgment decisions. Federal trial judges with fact-finding power have cut back on suits against generator defendants in accordance with their own subjective values. For example, a judge may grant summary judgment against a plaintiff because the judge disagrees with the scope of CERCLA's liability scheme or is sympathetic to a small business that disposed, legally at the time, of a small quantity of "hazardous" waste.

Moreover, CERCLA liability cases that rely on circumstantial evidence are particularly vulnerable to instrumental decisionmaking. The unique vulnerability derives from the need to draw two independent inferences before reaching the ultimate inference that a defendant is liable. The necessary stacking of inferences implicates a reasoning process analogous to the "product rule" of probability theory. Where courts raise the burden of production required to survive summary judgment up to the preponderance standard, summary judgment will likely issue because the "product" is so likely to be

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283 See supra notes 59–62 and accompanying text.
284 See supra note 62 and accompanying text.
285 See supra part IV.
286 See supra part V. Fairness is a noble goal, and one that judges in CERCLA actions rightly seek to encourage. Releasing individual responsible parties from clean-up costs, however, should not be regarded universally as the preferred solution. If this solution is used, the threats caused by hazardous waste disposal will remain and the costs of cleanup will be externalized by generators and fall on the taxpayer. Thus, fairness to some parties may conflict with fairness to other parties and certainly would work to defeat CERCLA's purposes.
287 Here "hazardous" is used in quotation marks to signal that some common wastes, such as paints or cleaning products, may not raise real concern in some judges, even though these substances contain listed constituent elements. See supra note 177 and accompanying text.
288 See supra notes 107–14 and accompanying text.
289 See supra note 113.

Consider four permutations of the strength of the intermediate inferences. If both intermediate inferences are supported by highly probative evidence, the court should easily reach the ultimate inference and deny the defendant's motion for summary judgment. If neither intermediate inference is supported by plausible evidence, the court should grant the defendant's motion for summary judgment. More difficult cases occur when both intermediate inferences are supported by some, though by no means obviously sufficient, evidence, and when one interme-
below the fifty percent preponderance threshold. Thus, circumstantial evidence cases against CERCLA generator defendants are especially likely to fail at the summary judgment stage and may be paradigmatic examples of the increase of "false exculpation" error predicted by commentators in the wake of *Matsushita, Liberty Lobby,* and *Celotex.*

B. Refusal To Draw the Ultimate Inference: Examples of "Product Rule" Reasoning in Dana and Acme

The linguistic formulation of the standard set out in *Dana*—that the "plaintiff must present evidence sufficient to support, by a preponderance of the evidence, a finding that a defendant's hazardous waste was disposed of at the site in question"—is an appropriate
diate inference is fairly well supported and the other intermediate inference is very much in question.

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Probability of Inference 1</th>
<th>Probability of Inference 2</th>
<th>Probability of Ultimate Inference</th>
<th>Ruling on Defendant's Motion (Expected)</th>
<th>Ruling on Defendant's Motion (Observed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>&gt;70%</td>
<td>&gt;70%</td>
<td>&gt;50</td>
<td>Deny</td>
<td>Deny</td>
</tr>
<tr>
<td>2</td>
<td>&lt;30%</td>
<td>&lt;30%</td>
<td>&lt;0.9</td>
<td>Grant</td>
<td>Grant</td>
</tr>
<tr>
<td>3</td>
<td>35—65%</td>
<td>35—65%</td>
<td>12—42%</td>
<td>?</td>
<td>Grant</td>
</tr>
<tr>
<td>4</td>
<td>90—100%</td>
<td>10—45%</td>
<td>09—45%</td>
<td>?</td>
<td>Grant</td>
</tr>
</tbody>
</table>

This relationship can be illustrated by statistics. In general, when two events are statistically independent of one another, the likelihood that both events will occur is the product of the likelihood that each would occur. See *supra* note 113. Where the probability of each occurrence is less than one, or 100%, the product of the two will be lower than the probability of the least likely occurrence. Thus, a situation may occur where each independent event is more likely than not to occur, and each event appears to meet a preponderance of the evidence standard. The occurrence of both events, however, is not very likely or does not appear likely enough to support a finding. As the degree of certainty of one intermediate inference begins to approach the extreme of 100%, the ultimate inference becomes easier to draw. If the product of the probabilities of the two events exceeds 50%, the preponderance of the evidence standard is met and the plaintiff should survive summary judgment. The difficulty of application of the "product rule" model arises from the necessity of quantifying the "sufficient to support a finding" standard by which summary judgments are measured.

If courts in fact raise the burden of production of evidence to equal the burden of persuasion at trial, summary judgment will be granted in Scenarios 3 and 4 in the above chart because the product of the independent parts is always less than the 50% preponderance threshold.

290 See *supra* note 289.

291 See *supra* note 62.
starting point for analysis. This statement of the standard to apply to a generator defendant’s motion for summary judgment indicates that the court heard the call of Liberty Lobby and raised the standard to survive summary judgment up to the burden of persuasion at trial. The standard refers both to sufficiency of evidence to support a finding, and proof by a preponderance of the evidence. Certainly, the Dana court set a much higher hurdle than that set by courts in Conservation Chemical, United States v. Price, and United States v. Wade. In fact, the Dana court’s application of the standard to individual generator defendants revealed a reluctance to draw inferences against generators and confirmed the relevance of the “product rule” reasoning model.

Treatment of generator defendant Syracuse Rubber comports with the proposition that courts use a reasoning process analogous to the “product rule.” Because one element of liability—the existence of hazardous substance in the waste stream—approached a likelihood of 100%, the court appeared willing to allow the ultimate inference even though the amount of the defendant’s waste that reached the site was in question. The court was not free to refuse the ultimate inference because the disposal element was the subject of direct testimony presented by the plaintiff. Thus, where direct evidence established one element at 100%, and indirect evidence established the other element at near 100%, the court permitted the ultimate inference.

Although the court reached a different result by granting the summary judgment motion of the City of Warsaw, a generator of municipal solid waste, the analysis still comports with “product rule” reasoning. The plaintiff proved beyond doubt that the generator defendant disposed of waste at the facility. Despite testimony describing the contents of the waste and an expert’s conclusion that the waste con-

292 Dana, 866 F. Supp. 1481, 1489 (N.D. Ind. 1994).
293 See id.
294 See id.
295 See supra notes 120-26 and accompanying text.
296 See infra notes 309-44.
298 See id. at 1531.
299 See id. at 1530. “Mr. Call testified that he picked up Syracuse Rubber roll-offs and that he disposed of about 15% of the waste at the Site.” Id.
300 See id. at 1531.
301 Id. at 1506.
302 Dana, 866 F. Supp. at 1505.
tained hazardous substances, the court was not satisfied that the plaintiff had met the burden to produce evidence about the hazardous nature of the defendant's waste. Because the court found almost completely implausible the inference that the waste was hazardous, application of "product rule" reasoning pointed toward granting summary judgment.

Although the decision model was similar to that used for Syracuse Rubber, the court reached a different result for the City of Warsaw. In both cases, the plaintiff attempted to prove that the defendant's waste contained hazardous substances by presenting circumstantial evidence. The court may have been more permissive in granting the summary judgment motion of the City of Warsaw because the defendant was a municipality, a relatively sympathetic defendant. The disparate treatment of these two generator defendants reveals a court's power to act instrumentally. The Dana court appeared to discredit facts and reject inferences to reach results that best comport with the court's subjective notions of equity.

Treatment of defendant Huber Hunt is another example of the Dana court's unwillingness to draw inferences against generator defendants in CERCLA liability actions. Despite a driver's testimony that seventy-five to eighty percent of the defendant's waste reached the site, and some evidence that the waste contained hazardous substances, the court granted the defendant's summary judgment motion. In reaching this conclusion, the court intimated that the ultimate inference would have to be more likely than not before the court would allow such an inference. The court appeared skeptical of the driver's testimony establishing the disposal element, and subjectively

303 Id.
304 Id. at 1506.
305 See id.
306 See id. at 1531.
307 See Dana, 866 F. Supp. at 1505-06, 1529.
308 See id. at 1505.
309 See id. at 1528-31.
310 See id.
311 See id. at 1516-18.
312 See Dana, 866 F. Supp. at 1518.
313 See id. at 1517. "At best, the evidence is sufficient to show that some Huber Hunt waste went to the Site; the evidence does not support an inference that it is more likely than not that any of Huber Hunt's waste taken to the Site contained hazardous substances." Id. Thus, the court reiterated the proposition that the plaintiff's burden equaled the burden of persuasion at trial. See id.
discredited this testimony under the authority of Liberty Lobby.314 Nothing in the record hints that Huber Hunt was an especially sympathetic plaintiff.315 Here, the perception of unfairness in CERCLA's liability scheme may best explain the court's decision.

The court's behavior in Acme316 was parallel to that in Dana, especially in the way the Acme court weighed the facts presented by the plaintiff.317 Although the court in Acme purported to be "viewing the evidence in a light most favorable to [the plaintiff],"318 the court actually screened facts through a subjective filter, crediting facts presented by the defendant while discrediting those presented by the plaintiff.319

In the case against Bel-Aire, the plaintiff presented evidence that Bel-Aire dumped dirt and broken concrete at the site.320 Although the plaintiff showed that asphalt, a hazardous substance, was intermixed with such wastes, the court rejected the inference that the asphalt came from the defendant.321 The court rejected this inference despite the fact that the defendant would naturally have found asphalt in the driveways, sidewalks, and streets that Bel-Aire removed from paving sites.322 In discrediting the plaintiff's proposed factual finding, the court gave credence to the testimony of an employee of the site owner.323 In addition to the self-interested testimony of the defendant, the court credited the employee's testimony about not seeing the defendant dump asphalt as establishing the nonhazardous nature of the waste.324 And yet, Bel-Aire apparently dumped at the site without being supervised by anyone, let alone the employee whose testimony established that the waste was nonhazardous.325 Thus, the court used the power to weigh facts subjectively to undercut the plaintiff's case.326

314 See id.
315 See id. at 1516–18.
317 See id. at 1483–98.
318 Id. at 1483.
319 See id. at 1483–98.
320 Id. at 1483.
322 See id.
323 See id. Both the site owner and the employee were named defendants in the plaintiffs' action for contribution. Id. at 1465.
324 See id. at 1483.
325 See id.
Furthermore, the *Acme* court persisted in finding that testimony of the co-defendants, the driver and the site owner, established a presumption that certain types of waste were not disposed of at the site.\(^{327}\) The site owner and driver testified that the firm's policy was to dispose of rubbish at a different site.\(^{328}\) However, rubbish containing hazardous material was found at the site and the driver admitted to dumping rubbish there on occasion.\(^{329}\) The court preferred to view this testimony as establishing a presumption that no defendant's rubbish was dumped at the site and used this presumption against the plaintiff in several generator cases.\(^{330}\)

Perhaps the most bizarre result in *Acme* is the court's grant of summary judgment to defendant Service Painting Corporation.\(^{331}\) The testimony of the driver about whether he had hauled paint cans from the defendant was contradictory.\(^{332}\) Moreover, the driver was shown photographs of paint cans from the site and testified that it was very possible that the cans came from the defendant.\(^{333}\) Nonetheless, the court stated that paint cans were a "relatively common waste" and discredited the facts presented by the plaintiff as establishing that the cans came from the defendant.\(^{334}\) Because the court resolved the disposal element completely in the defendant's favor, the court did not even reach the question of whether the waste was hazardous before granting summary judgment on the CERCLA claim.\(^{335}\) Thus, the court used its fact-finding authority instrumentally to cut back on the potential scope of CERCLA liability.\(^{336}\)

\(^{327}\) See id. at 1485.

\(^{328}\) Id.

\(^{329}\) Id.

\(^{330}\) See id. at 1485–97 (pointing to hauler's alleged policy of not taking rubbish to site as establishing a fact that plaintiffs must overcome as to defendants Cambridge Chemical, Cardinal Fabricating, Hartwig Exhibitions, Lincoln Savings Bank, Service Painting Corporation, and Texaco).

\(^{331}\) See *Acme*, 870 F. Supp. at 1494–96.

\(^{332}\) Id. at 1495.

\(^{333}\) Id.

\(^{334}\) See id. at 1496.

\(^{335}\) See id.

\(^{336}\) See *Acme*, 870 F. Supp. at 1494–96. In terms of achieving an equitable and socially acceptable result, the court may further justify the decision for Service Painting by pointing to the fact that the plaintiffs were allowed to proceed against Service Painting on a RCRA claim. See id. at 1496. Thus, the court may have balanced competing interests by leaving the defendant open to some liability. See id.
In summary, both the Dana and Acme courts used the full arsenal of weapons provided by Matsushita, Liberty Lobby, and Celotex to cut off suits against CERCLA generator defendants at the summary judgment stage. The courts in Dana and Acme raised the plaintiff's burden to survive summary judgment to a preponderance level, weighed facts instrumentally to ensure favored results, and discarded unwanted inferences as implausible. Furthermore, these courts appear to have used a reasoning process analogous to the “product rule” to prevent acceptance of the ultimate inference. Although none of these practices are impermissible under the Supreme Court's summary judgment regime, judicial activities of this type increase false exculpation of CERCLA generator defendants as predicted by commentators. Accuracy may not be the most important goal for courts deciding whether to impose liability on small businesses, especially in light of CERCLA's problematic liability provisions. Nevertheless, if unstated, subjective biases create legally inexplicable CERCLA liability decisions, litigants will perceive less, not more, fairness in the system. Therefore, a more rational and aboveboard approach to deciding generator liability is necessary.

VI. CONCLUSION

This Comment has attempted to provide background information on summary judgment and CERCLA liability necessary for consideration of a CERCLA generator defendant's motion for summary judgment. In reviewing decisions in this area, this Comment has found a judicial trend toward taking advantage of the opportunity provided by Liberty Lobby to inject subjective considerations into summary judgment rulings. Acting instrumentally in reaction to the

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337 See supra notes 45–63 and accompanying text for changes wrought by Matsushita, Liberty Lobby, and Celotex.
338 See supra notes 297–336 and accompanying text for application by Dana and Acme courts.
339 See supra notes 297–336 and accompanying text.
340 See supra notes 297–336 and accompanying text.
341 See supra notes 62, 113.
342 See supra note 113; see generally Nesson, Proof and Acceptability, supra note 12.
343 See supra notes 7–12 and accompanying text.
344 There are at least two relatively straightforward ways to allow for explicit recognition of the concerns that currently appear to effect judicial decisions, albeit implicitly. First, an expansion of the de minimis exception to liability would allow many more small business waste generators to escape liability. Secondly, allowing equitable defenses to liability would bring concerns for fairness into the light of day. Both of the measures would afford resolution early on, thus also promoting judicial economy.
perceived unfairness of CERCLA, courts have used several tools to limit the reach of CERCLA liability. Chief among these tools is a reasoning process, analogous to the “product rule” from probability theory, that inevitably undercuts inferences from circumstantial evidence by lowering the apparent likelihood that a defendant disposed of hazardous waste at the litigated facility, and justifies the court in finding that the plaintiff’s claims are implausible. This Comment argued that the use of “product rule” reasoning in CERCLA generator cases will increase the false exculpation of generators of hazardous waste who should be liable under a literal reading of CERCLA. Finally, this Comment argued that even though concerns for fairness, as subjectively determined by the judge ruling on a summary judgment motion, may explain particular decisions, the varying results of this implicit process will ultimately engender a greater perception of unfairness in CERCLA liability.